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ABSTRACT

To provide a consistent framework for evaluating competing reading methods and materials, an assessment instrument was devised to help over 100 inservice educators evaluate the middle grade components of five nationally used basal reader programs: the Holt Basic Reading System; the Open Court Correlated Language Arts Program, the Ginn Reading 360 Program; the Scott, Foresman Reading Unlimited Program; and the Prentice-Hall Be a Better Reader Program. Consisting of six theoretical dimensions, the instrument assessed 48 of the most common approaches found in the literature of reading instruction. Three of these dimensions represented views of reading and language: reading as producing the spoken analogue of printed language, reading as the reconstruction of the author's message, and reading as the construction of knowledge about and/or beyond the author's message. The three other dimensions represented views of the teacher-learning process: text controlled, teacher controlled, or reader/student controlled. A principle finding revealed by data analysis was the similarity of the five programs. All five placed most of their emphasis on a relatively behavioristic, "bottom-up" methodology. Despite the quantitative similarity, however, teachers favored some programs over others. Multiple choice and missing elements activities were favored as well as programs that offered convenience in task management. (Extensive appendixes containing research instruments and results are appended.) (HOD)

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A STUDY OF THE THEORETICAL BASES OF READING INSTRUCTION AND A COMPARISON OF PROGRAMS

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I. Background and Theoretical Framework

Overview: Universals in Reading Education

Several international studies have produced concise and useful descriptive categories for the range of approaches to reading instruction that are used around the world. In 1949, UNESCO's International Bureau of Education reported the results of a forty-five nation questionnaire survey and classified reading instruction methods into three categories:

1. Synthetic Methods. These include the alphabetical method, all the various phonic and phonetic methods, and the methods of direct reading of syllables.
2. Analytic Methods. Among the variants of these methods, also called ideo-visual and sentence (or "global") may be included those which begin with the word, sentence or story.
3. Analytic-Synthetic Methods. These methods are based on the word or sentence, and the most characteristic of them is the so-called common words method.

(International Bureau of Education, 1949, pp. 24-25)

Explanations of these definitions indicated that with synthetic methods children first learn letters and sounds and put these together to decode words and sentences. With analytic methods, children begin with words, sentences, and passages connected with their activities, interests, and everyday concerns and later analyze these into smaller linguistic elements. Analytic-synthetic methods combined the two approaches eclectically.

In 1956, Gray reported the results of a landmark UNESCO study of the international status of reading instruction (Gray, 1956). In summarizing his findings, Gray saw difficulty with the earlier three-method classification because he found disagreement regarding the class to which particular methods belonged. Alternatively, Gray described an historical dialectic wherein the analytic and synthetic methods were the earlier opposing approaches, and the newer eclectic approach was a synthesis of the two that was enjoying growing international acceptance. He saw the professional methods of teaching reading around the world at that time

as combining into a single program what had been particular methods before.

In 1973, Downing reported a landmark study of comparative reading (Downing, 1973). In comparing data from thirteen countries that were selected as examples of noteworthy differences in language, culture, and education systems, he determined that events since 1956 had not borne out Gray's belief in a growing acceptance of eclecticism. In fact, Downing determined that no method or synthesis of methods was clearly in favor anywhere in the world; the same debates about methods of reading instruction were found in all countries, regardless of writing system, cultural characteristics, or educational traditions. Downing described a universal dimension that can be seen as a continuum for classifying differences in reading instruction methods:

> Atomistic decoding and meaningful chunking represent its two extremes. Whether one is dealing with letters that represent phonemes, or a syllabary that signals the relevant sound group, or logographs that signify morphemic units, the same alternatives are available. One can begin by emphasizing the atoms of written language, for instance, either in the separate letters of written words in English or in the radicals of Chinese logographs. Or one can put the emphasis on the larger chunks of written language that convey linguistic meaning. In parallel with this, the alternative emphases are the mechanics of the decoding task versus its communicative function.
>
> (Downing, 1973, p. 149)

Downing also suggested three universal dimensions of general education that affect the literacy learner's classroom experiences and influence the teacher's choice among the alternative methods of reading instruction. These dimensions were 1) child-centered versus curriculum-centered thinking, 2) formal versus informal approaches, and 3) individualized versus mass teaching techniques (Downing, 1973, p. 158). Downing perceived that child-centered education was often associated with informal approaches and individualization where individualization was taken to mean student self-selection in reading materials and self-pacing in learning to read. Curriculum-centered education could be associated more with formal approaches, mass education, and

individualization where individualization is taken to mean systematically moving through a particular reading program at different individual rates (Downing, 1973). These distinctions might by further refined into a second universal continuum. At one end of this continuum is a program-centered curriculum with relatively formal approaches, larger groups, and individualization with the program as the locus of control. At the other end of this continuum is a child-centered curriculum with relatively informal approaches and individualization with the student as the locus of control. Teacher attitude and orientation toward general education determine location on this continuum and effect the selection of reading instruction methods.

Overview: Reading Education in the United States

The descriptions of reading instruction and general education as viewed from a broad international perspective are particularly applicable to the reading scene in the United States. In 1967, Chall presented a summary of reading approaches in the United States as they had evolved from 1910-1965. Chall divided reading instruction approaches into two broad categories: code emphasis approaches and meaning emphasis approaches. Code emphasis approaches were comprised of those methods which initially emphasized breaking the alphabetic code and learning letter-sound correspondences. Meaning emphasis approaches were comprised of those methods which initially emphasize getting meaning (Chall, 1967).

Chall's categories are valuable, if broad, theoretical descriptors that reflect the international reading scene as described by the UNESCO studies and by Downing (1973). Chall assigned particular reading methods such as phonics, sight vocabulary, or language experience methods into either of these categories, and after reviewing the relevant research literature called for more attention to code emphasis approaches in early reading instruction. A decade later, Chall found these categories to be still useful in describing the reading scene in

the United States, which, she felt, had moved in the direction she had earlier suggested (Chall, 1977).

While Chall's categories serve as valuable theoretical descriptors, their empirical value for differentiating actual reading programs and actual reading instruction is doubtful. Corder (1971) studied the information base for reading instruction and achievement for the United States Office of Education soon after Chall's (1967) study was released. In a review of over 800 studies of reading methods and materials, many of which were systematically excluded due to insufficient empirical rigor, Corder concluded that different methods of teaching reading did not produce significantly different results. Corder criticized Chall's conclusions as being more representative of her own theoretical position than of the extant body of good quality research, and suggested that comparing methods might be ultimately impossible:

> Thus under this latter conception, as many methods of reading instruction may exist as are created by the interactions of particular children with a particular teacher. The teacher, in essence, must invent a reading method for every child in her class every year.
>
> (Corder, 1971, p. 128)

Indeed, Chall (1967) had earlier noted that teachers invariably make adjustments in methods, often in direct violation of the theoretical position of the program being used, to suit their own convictions and styles of teaching.

An even more basic problem in comparing methods is a lack of adequate description of the methods used. Terminology is often inconsistent, overlapping, and confusing, and methods frequently represent quite different concepts, ranging from whole philosophies to classroom organization practices to particular sets of materials. Both Chall (1967) and Corder (1971) suggested that empirical research in reading instruction methods would be fundamentally improved by better specification of the variables involved in employing different methods.

In 1978, Goodman and Page addressed the need for specificity in adequately describing reading methods. Noting the theoretical inconsistency common in many

reading programs, they established a paradigm of alternative theoretical dimensions underlying a categorization of nearly one hundred variables commonly found in reading instruction in an effort to establish a logical basis for discriminating and classifying these programs:

> If our paradigm can not separate and neatly classify entire reading programs, it can provide the critical dimensions for analyzing and comparing programs. It can delineate consistencies and inconsistencies. It can bring some order to the chaos Corder found.
>
> (Goodman and Page, 1978, p. 10)

The content of seven nationally used commercial reading programs for the middle grades was empirically compared using this paradigm. No significant differences were found between the programs on any of the underlying theoretical dimensions, despite the fact that the programs appeared on the surface to take somewhat different positions toward reading instruction. Goodman and Page (1978) concluded that these seven programs did not reflect coherent and consistent theoretical bases. Reading instruction emanating specifically from such programs could hardly be distinguishable. The researchers concluded by calling for more theoretically consistent and educationally defensible reading programs.

The present status of dimensions underlying general education in the United States that effect teachers' orientations to reading instruction are also similar to those found in Downing's (1973) international study. Rosenshine (1979) and Peterson (1979) have summarized the current research literature on the effects of differing paradigms of teaching methodology into two polar positions. Rosenshine (1979) describes direct instruction, an educational approach characterized by teacher-centered, formal, controlled instruction that is heavily didactic and directed to larger groups. This type of instruction appears to be more related to analytic, cognitive achievement. Peterson (1979) describes open instruction, an educational approach characterized by student-centered, less formal, inquiry-oriented learning with much individual work and a heuristic emphasis. This type

of instruction appears to be more related to independence, attitude, and affective learning. These polar positions bear a fundamental resemblance to the universal general education continuum described above in Downing (1973), and constitute a continuum in general education in the United States that effects teacher orientation to reading instruction.

In an effort to summarize these reading and education debates, the National Institute of Education and the Basic Skills Program of the Department of Education have attempted to determine a consensus on current positions in the teaching of basic skills in the United States. Three positions in reading emerged from this consensus: 1) the subskills approach, 2) the holistic-functional approach, and 3) the mixed, or eclectic, approach (Reed and Ward, 1982).

The subskills approach views reading as a series of component skills, each made up of a series of subskills which are learned and mastered in an orderly sequence. In this approach, reading instruction begins with the skills of decoding phonic units and words and progresses to the skills of comprehending words, sentences, and larger units of written language. This approach is often associated with direct, formal, curriculum-centered instruction with the program as the locus of control, as in criterion-referenced management systems.

The holistic-functional approach views reading as one aspect of language learning, to be done always in meaningful, functional contexts. Reading for comprehension and communication is emphasized from the beginning. Larger language units are employed in early instruction, with the analysis of words, letters, and sounds receiving reduced emphasis. This approach is often associated with open, less formal, student-centered instruction with the reader as the locus of control, as in individualized reading.

The mixed, or eclectic, approach combines some array of practices drawn from the other two positions. This approach is usually associated with the use of basal readers, ability grouping, and primarily formal instruction with the teacher and

program as to loci of control. The language unit emphasized is usually the word, with supplemental phonics associated. A degree of comprehension is stressed from the beginning, but comprehension is emphasized more as the learner progresses through the program. Other reading activities such as language experience or recreational reading are seen as secondary to the basal program. Most teachers presently use some form of eclectic approach in reading instruction.

These three positions describe the broad alternatives available in reading education in the United States, and clearly reflect the international status of reading education as well. For this study, two basic underlying dimensions are precipated from these positions to form a theoretical framework. The first dimension is a continuum which defines alternative positions about reading and language; the second dimension is a continuum which defines alternative positions about teaching and learning.

Theoretical Framework

Reading is seen here as the interaction or transaction that takes place between a reader and a printed text: both are necessary parties in the enterprise. Reading can be seen as more print based or more reader based, depending on the conceptualization of reading applied. If reading is conceptualized as decoding to speech, the input from the print is primary. If reading is conceptualized as comprehending, then both print and reader input share primacy. If reading is conceptualized as reflective thinking, then input from the reader is primary. This polymorphous conceptualization of reading is philosophically explored in Daniels (1970,1979,1982). For this study,terms from Goodman and Page (1978) are used to describe three points of polarity on the reader-print continuum: 1) producing the spoken analogue of the author's printed language (SA), 2) reconstructing the author's message (RM), and 3) constructing knowledge about the author's message (CK). This dimension reflects the alternative views of reading and is illustrated in Figure I.

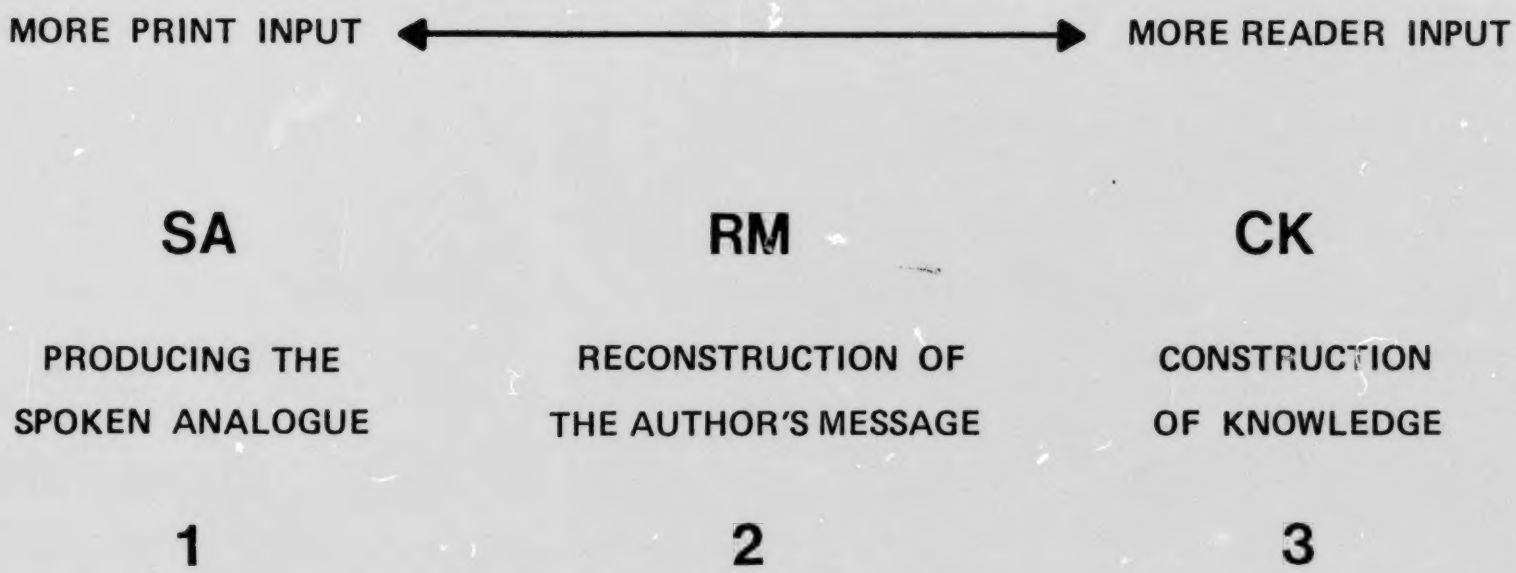


Figure 1

Reading - Language Dimension

The second dimension in the framework is a continuum defining two major alternatives in teaching and learning. One pole of the continuum is defined as direct instruction, and the other pole as open instruction. Instruction can be more direct or more open depending on the conceptualization of teaching and learning applied. Because reading instruction necessarily involves a reading program or text material to be read, it can be conceptualized as an interaction or transaction involving three parties: the reader, the text materials, and the teacher. In any reading instruction situation one of these three parties will be dominant, while the remaining two will be subordinate. In the first possible situation, the text materials and the reading program determine purposes for reading and control the teaching-learning situation. The teacher and students follow directions provided in the program. In the second possible situation, the teacher determines purposes for reading and controls the teaching-learning situation. The reader and the text materials are subject to the teacher's perception, selection, and direction. In the third possible situation, the reader determines purposes for reading and controls the teaching-learning situation. The teacher and text materials are used as resources for the student's learning requirements. Text-controlled situations (TX) lean toward the direct instruction pole of the continuum, while reader-controlled situations (RDR) lean toward the open instruction pole of the continuum. Teacher-controlled situations (TR) are in a swing position: the teacher can serve either as a purveyor of specific reading programs (leaning toward direct instruction), as a guide and monitor of student-centered learning (leaning toward open instruction), or as an eclectic agent, selectively combining features from diverse sources. This dimension reflects alternative views of teaching and learning, and is illustrated in Figure 2.

In this theoretical framework all reading instruction can be categorized according to its degree of polarity on each of the two continuums. Since three theoretically identifiable points exist on each continuum, a 3x3 matrix can be constructed. Any reading instruction activity can be theoretically placed into

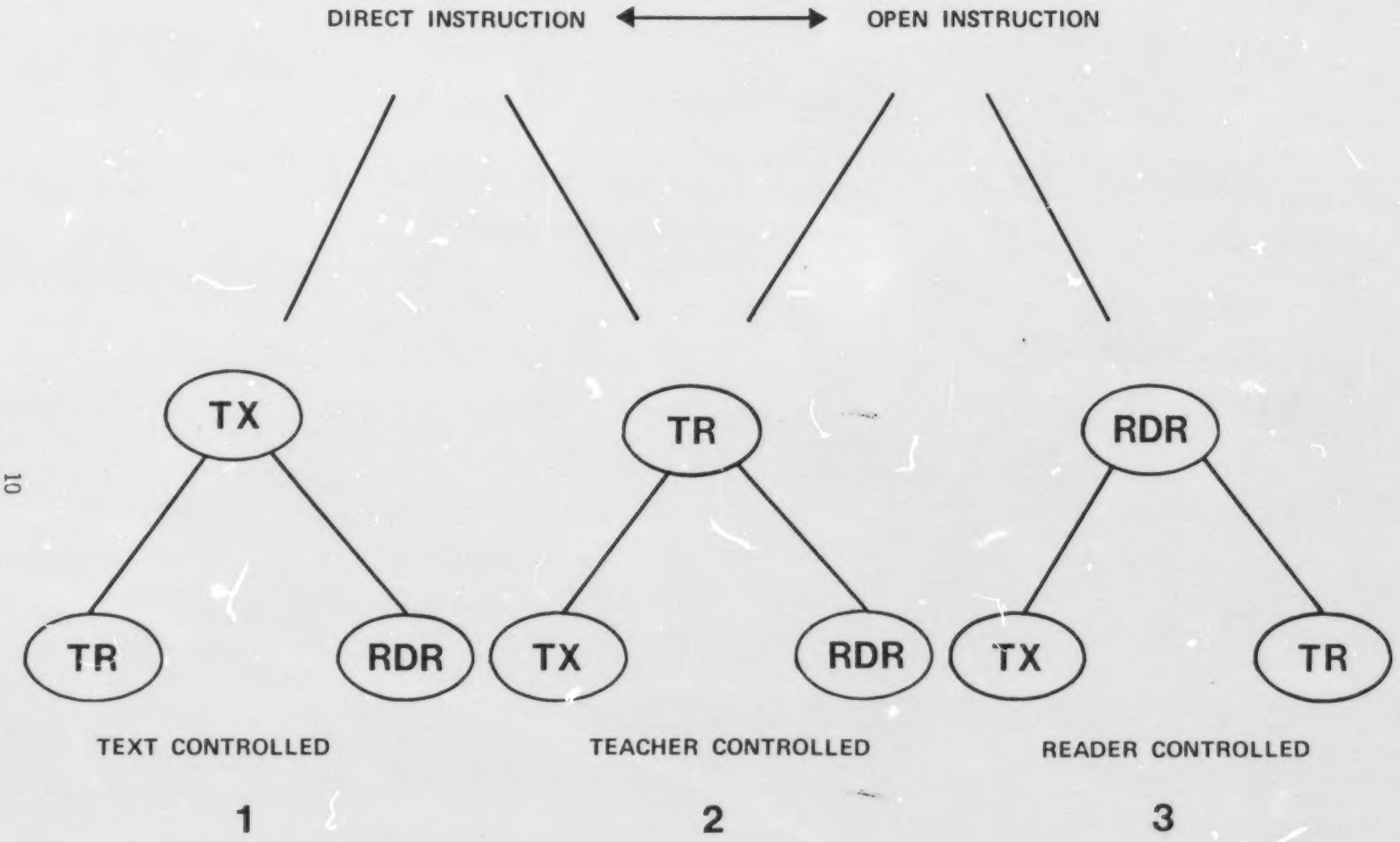


Figure 2

Teaching - Learning Dimension

one of the nine resulting frames in this matrix. This is graphically illustrated in Figure 3. Since in reality instructional events are not discrete and easily separable entities, dotted lines are used to indicate overlap in this diagram.

II. The Problem and the Study

The Problem

This study seeks theoretical and empirical insights into the ambiguities and perplexities that surround reading instruction methodology. Numerous researchers have pointed out the difficulty posed by undifferentiated and overlapping concepts in the description of reading methods and materials, and the consequent difficulty in distinguishing the application of different programs. The latter difficulty may be insurmountable except in controlled experiments. This study addresses itself to the former difficulty.

In a real sense this study picks up where Goodman and Page (1978) left off. Goodman and Page (1978) sought to specify the attributes of general methods of reading instruction into a number of particular dimensions for the purpose of clearer program comparisons than Chall (1967) or Corder (1971) could derive from their reviews of the literature. This study borrows from the theoretical framework of the Goodman and Page (1978) study, and forms a partial replication of that study. In addition, this study modifies and reworks the paradigm into the form of an assessment instrument that has a high degree of utility for application by classroom teachers and school personnel, and subjects that instrument to the practical scrutiny of over one hundred inservice educators evaluating the middle grade components of five nationally used basal reader programs.

The value of an instrument that can categorically distinguish reading programs and objectively assess their theoretical leanings could be felt in several ways. The prevalence of system-wide and statewide textbook adoptions coupled with a burgeoning array of reading materials being marketed to schools breeds a

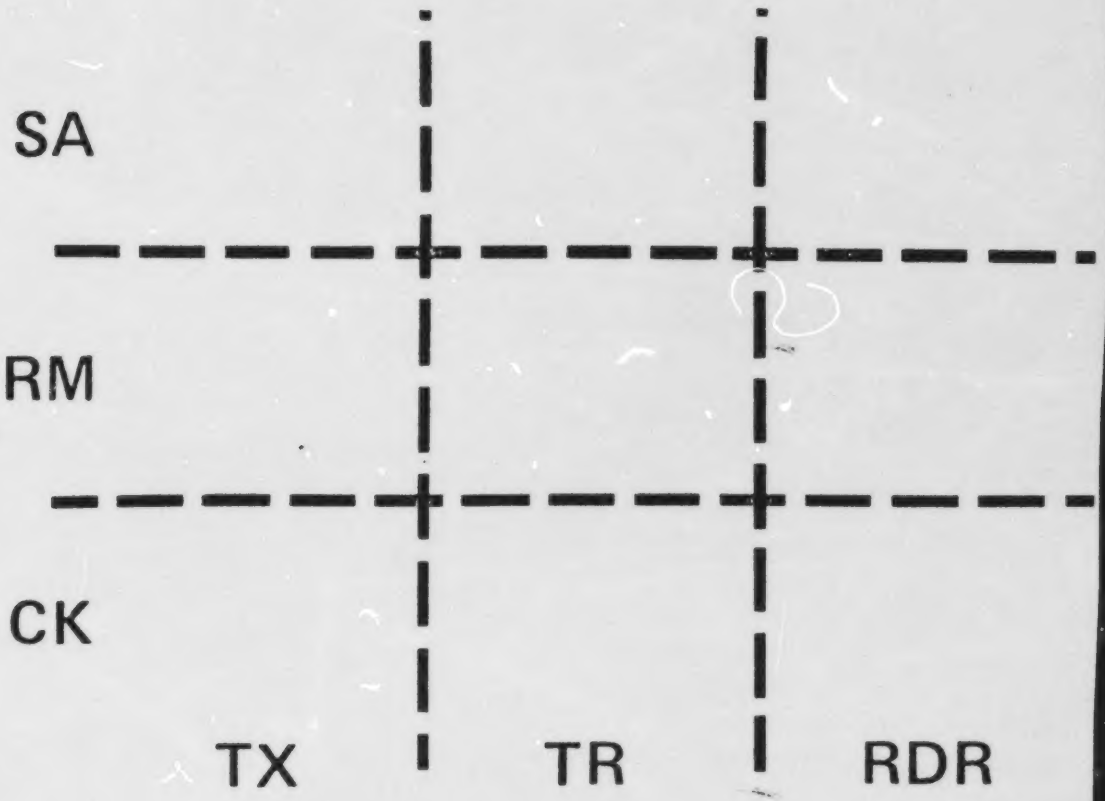


Figure 3

Theoretical Dimensions Matrix

situation where objective baseline data on program orientation is a necessity. In local situations, the information afforded by a program assessment of this kind would be of assistance in helping teachers decide how best to modify or supplement given materials to accomodate their own accepted theories of reading instruction and general philosophies of education. In the empirical arena, the data produced by the assessment instrument in this study could serve as the basis for the program specification so needed in the research literature.

The Study

In this study a reading program theory assessment instrument is devised which profiles reading programs. Six dimensions on two continuums are identified which are theoretically central to reading instruction. Middle grade readers from five nationally used basal reader programs are assessed on forty-eight of the most common approaches found in the literature of reading instruction. The methods represented by this array of approaches range from programmed phonics drill to individualized reading for self-concept improvement. The evaluators are in-service teachers and graduate students in reading. Each of the forty-eight approaches is numerically rated on relevant dimensions, and the six dimensions are summarily rated for each program. Statistical comparisons are made and conclusions are drawn. Evidence of reliability and validity are presented. Theoretical and practical implications are discussed. Data necessary for replication are presented.

III Methodology

Reading Program Theory Assessment Profile Instrument

The instrument used to assess and profile the theoretical bases of reading programs in this study is exhibited in Figure 4. Forty-eight terms which reflect activities and approaches prevalent in the literature of reading education are

PROFILE INSTRUMENT

ACTIVITY OR APPROACH	# of blanks	THEORETICAL DIMENSION					
		Reading and Language			Teaching and Learning		
		SA	RM	CK	TX	TR	RDR
1. Program Focus							
a. Matching sounds and letters	(1)	___					
b. Whole word identification	(1)	___					
c. Word meaning recognition	(1)		___				
d. Syntactic reconstruction	(1)		___				
e. Meaning reconstruction	(1)		___				
f. Knowledge contruction	(1)			___			
2. Getting Meaning From Print							
a. Configuration	(1)	___					
b. Phonics	(1)	___					
c. Word structure	(1)	___					
d. Dictionary skills	(3)	___	___	___			
e. Context	(2)		___	___			
3. Language Unit Emphasized							
a. Sub-word	(1)	___					
b. Words	(1)	___					
c. Phrases, clauses, sentences	(1)		___				
d. Paragraph	(1)			___			
e. Passage, story, chapter	(1)			___			
f. Entire book or content area	(1)			___			
4. Comprehension Tasks							
a. Subjective reporting and discussion	(2)		___	___			
b. True-false questions	(2)		___	___			
c. Multiple-choice questions	(3)	___	___	___			
d. Following directions	(2)		___	___			

Figure 4
Profile Instrument

	#	SA	RM	CK	TX	TR	RDR
e. Missing elements	(2)	—	—				
f Questions about a passage	(2)		—	—			
g. Message recognition	(1)		—				
h. Message reproduction	(1)	—					
5. Level of Comprehension							
a. Literal	(1)		—				
b. Inferential	(1)		—				
c. Evaluative	(1)			—			
d. Appreciative	(1)			—			
6. Locus of Control and Purpose for Reading							
a. Text determined	(1)				—		
b. Teacher determined	(1)					—	
c. Student determined	(1)						—
7. Role of the Learner							
a. Passive*	(2)				—	—	
b. Active	(1)						—
c. Interactive	(1)						—
8. Role of the Teacher							
a. Passive	(1)				—		
b. Active	(1)					—	
c. Interactive	(1)						—
9. Curriculum Emphasis							
a. Phonics	(1)				—		
b. Word recognition	(1)				—		
c. Language experience	(1)						—
d. Directed reading lesson	(2)				—	—	

Figure 4

Profile Instrument (cont.)

	#	SA	RM	CK	TX	TR	RDR
e. Theme or content unit	(2)					—	—
f. Differentiated instruction	(2)					—	—
g. Diagnosis - prescription	(2)				—	—	
h. Individualization (partial or complete)	(1)						—
i. Student self-concept and social improvement	(3)				—	—	—
j. Technology	(1)				—		
Column Total (raw score)							
Weighting Factor (x raw score)		1.36	-	1.16	1.65	1.89	1.65
Final Score (range: 0-45)							

Scoring Scale:

0-11 low emphasis

12-22 low-to-moderate emphasis

23-33 moderate-to-high emphasis

34-45 high emphasis

* Learners may be passive either to the text (TX) or teacher (TR). Rate the appropriate dimension to the extent that learners are passive to it.

Figure 4

Profile Instrument (cont.)

arranged in nine categories. Twenty-nine terms related to reading and language instruction are arranged in 5 of these categories: Program Focus, Getting Meaning From Print, Language Unit Emphasized, Comprehension Tasks, and Level of Comprehension. These terms and categories are related to three identified theoretical dimensions in reading and language: Spoken Analogue (SA), Reconstruction of Message (RM), or Construction of Knowledge (CK). Nineteen terms related to teaching and learning as they apply to reading are arranged in four categories: Locus of Control and Purpose for Reading, Role of the Learner, Role of the Teacher, and Curriculum Emphasis. These terms and categories are related to three identified theoretical dimensions in teaching and learning: Text Controlled (TX), Teacher Controlled (TR) or Reader Controlled (RDR).

To use the instrument, evaluators first become fully familiar with the activity and approach terminology of the instrument, and fully familiar with the program materials (manuals, lesson plans, texts, workbooks, tests, etc.) to be assessed. The presence of each activity or approach in the program materials is then rated on each relevant dimension where a blank is provided on the instrument. Ratings range from 0-3 on the following basis:

0 = no occurrence of this activity or approach

1 = few occurrences of this activity or approach

2 = a regular occurrence of this activity or approach

3 = many occurrences of this activity or approach

Where multiple blanks are provided, judgement must be used regarding the specific aims of the activity or approach. For example, dictionary skills (activity or approach 2d) are used to address all three dimensions in reading and language: the dictionary can be used to determine pronunciation (Spoken Analogue dimension), to check a definition (Reconstruction of Message dimension), or to explore the various meanings, forms, linguistic functions, usages, or etymologies of words (Construction of Knowledge dimension). Raters must distinguish the

proportions of this activity that are aimed at each dimension and rate each accordingly. Similarly, diagnosis-prescription (9g) in teaching can be controlled either by the program materials, as in skills management programs (Text Controlled dimension), or by the teacher's own decisions (Teacher-Controlled dimension). Raters must distinguish the approach and rate accordingly.

The activity and approach terms used in this instrument are not mutually exclusive. A high rating on one activity or approach would necessitate a high rating on other complementary activities or approaches. For example, the introduction of whole new vocabulary words prior to reading a selection that heavily employs these vocabulary words is common to the reading instruction approach called the directed reading lesson. Programs and materials relying heavily on the whole-word directed reading lesson approach would tend to receive substantial ratings on word meaning recognition as the program focus (1c), configuration as the mode of getting meaning from print (2a), words as the language unit emphasized (3b), a passive role for the learner (7a), and word recognition (9a) and directed reading lesson (9d) as the curriculum emphases. Other activities or approaches would also be rated according to the provision in the specific materials for comprehension instruction, teacher input, student input, etc. The feature of differentiated but overlapping concepts in the terminology allows for broader and more detailed program description and assessment, and provides for a degree of consistency and reliability in rating.

When all appropriate judgements and numerical ratings have been completed, the column for each dimension is totaled for a raw score. Because different dimensions have different numbers of blanks to be rated, a weighting factor is introduced to equalize scoring totals. When the raw score total is multiplied by the weighting factor, final scores on 0-45 scales are produced. Scores can be assessed and compared directly, or by using the quartile scoring scale provided. For applied purposes, the quartile scoring scale tends to eliminate minor differences and chance fluctuations from consideration. Specific numerical ratings are used for statistical comparisons.

When completed, the scores profile the given reading program on the six theoretical dimensions. It is critical to note that this profile shows the theoretical orientation that would be applied if the program were used verbatim, exactly as the publisher or producer intended. The particular personal variations that individual teachers inevitably and appropriately introduce in actual application are not and cannot be accounted for by this assessment. Rather, this assessment can serve as a basis for selecting, rejecting, altering, or supplementing a given program. In the present study, the assessment is used for empirical program comparisons and the production of theoretical data.

Appendix I contains a full manual for the use of the Reading Program Theory Assessment Profile. This manual contains a description of the instrument, guidelines for use and interpretation, and a discussion of practical benefits and limitations. Other discussions of empirical validity, reliability and interpretation limits are found elsewhere in this report. The manual also contains definitions of all the terms used in the profile, and the full Profile Instrument. The complete information in this manual was given to the evaluators in this study.

Programs and Materials

The reading programs assessed in this study were the middle grade (4, 5, 6) components of five basal reader series which have enjoyed national popularity. These programs were the Holt Basic Reading System (Holt, Rinehart & Winston, 1973), the Reading 360 program (Ginn & Co., 1970), the Open Court Correlated Language Arts Program (Open Court Publishing Co., 1971), the Reading Unlimited program (Scott, Foresman, 1976) and the Be a Better Reader program (Prentice-Hall, 1968). One of these programs, Reading 360, has been used with over 15,000,000 children in over 2,000 school districts (Beck and Block, 1975).

Examination of teacher's guides indicates that these programs take a variety of perspectives and approaches to reading education. The Holt Basic Reading System guide stresses a love of literature and the development of human values as well as

specific reading skills. Teacher control is encouraged. The Reading 360 program guide also stresses values development, literary appreciation, and specific language and reading skills, and puts additional emphasis on understanding the pluralistic nature of American society and the development of personal creativity. Text and teacher control are stressed. The Open Court program deals predominantly with classic literary content such as myth, fantasy, folktale, historical lore, fiction, and poetry. Each lesson uses a text-controlled directed reading lesson format and has extension activities involving composition, spelling, enrichment projects, and supplementary independent reading lists. The Reading Unlimited program derives more from psycholinguistic theory and stresses bringing meaning to print and developing individual strategies and skills for a useful variety of reading comprehension tasks. Reader control in setting purposes and tasks is encouraged. The Be a Better Reader program is a multi-purpose program which has suggested uses as a basal program, a supplementary program, an individualized instruction program, a remedial program, or a gifted reader program. This program is divided into theme units in various content areas such as literature, science, social studies, and mathematics using text-controlled lessons.

All of these five programs were assessed in the Goodman and Page (1978) study, and their inclusion in this study allows for a measure of replication and concurrent validation. Full program information, including readability ratings for the various readers, are included in Appendix II. A total of fifteen reading books with ancillary materials were evaluated.

Evaluators

The evaluators in this study were 105 teachers enrolled in graduate courses in reading at a state college in Connecticut during 1980-81. The great majority of these teachers had elementary classroom experience; a smaller number were secondary teachers. In a number of cases the evaluators had actually used in teaching the reading programs they were assigned to evaluate. Compared to a

National Education Association survey of a weighted sample of over 2,000 teachers, these evaluators were very like a national cross-section of teachers in sex and racial characteristics. The evaluators tended to be younger, somewhat less experienced, and less educated than their national counterparts. This comparison is given in Table 1. The figures for teachers who had actually used these reading programs are given in Table 2.

Data Collection

Data collection was done as an assigned project for a graduate course in reading education. the following procedures were carried out in data collection:

1. Demographic data was collected from the evaluators (age, sex, experience, use of program, etc.)
2. Evaluators were instructed in the theoretical framework of the study, the Profile Terminology, and the Profile Instrument (see Appendix I). Evaluators were assigned to study the Profile Terminology for a test.
3. A matching test was administered on the Profile Terminology. The mean score for the 105 evaluators on the 100 point test was 88.27, with a standard deviation of 11.75. Results were returned to the evaluators.
4. Evaluators were individually assigned to assess one level of a reading program. Balanced assignments were made with consideration to terms test knowledge, level of experience, background in reading, and use of program, such that a representative group of seven evaluators rated each of the fifteen books and ancillary materials from the five programs.
5. The evaluation work took place in a curriculum materials library. The setting was quiet and orderly. Approximately three hours were allowed for the evaluations in either two or three sessions. Work

Table 1

Evaluator Characteristics Compared to National Teacher Characteristics (Elementary and Secondary)

Variable	NEA National Sample (1980-81)*	Study Evaluators (1980-81)
Sex		
Female	83% (elementary only)	89%
Male	17% (elementary only)	11%
Race		
White	90%	93%
Black	8%	3%
Hispanic	2%	4%
Median Age	36	27
Median Years Experience	11	4
Highest Degree Held		
Bachelors	51%	83%
Masters	48%	15%
Sixth Year Certificate	?	2%
Ph.D.	.5%	0%
Reading Courses Taken	1 - 2 (estimated)	3.4 (avg.)
Reading Consultant Certification (working toward or have)	?	28%

*Source: Status of Teachers and NEA Members, National Education Association, October, 1981.

Table 2

Use of Program by Evaluators in Teaching

Program	Not Used	Used
I. Be a Better Reader	18 (17%)	3 (3%)
II. Reading Unlimited	21 (20%)	0 (0%)
III. Holt Basic Rdg. System	15 (14%)	6 (6%)
IV. Reading 360	13 (12%)	8 (8%)
V. Open Court	21 (20%)	0 (0%)
Total	88 (84%)	17 (16%)

was carried on independently, and those evaluating the same components did not communicate until after their assessment forms were turned in. During work sessions, evaluators referred to their terminology definitions and had instructor assistance available.

6. Materials assessed included publisher's statements, teacher's manuals, skills charts, textbooks, workbooks, and tests, where available. At the completion of the assessment, evaluators assigned their materials a holistic rating from one (low) to five (high).
7. Data were compiled for statistical analysis.

IV. Data Analysis

Program Descriptive Statistics

Descriptive statistics for the six theoretical dimensions on the 0-45 rating scales were computed by program across grade levels, by program and grade level, and by grade levels across programs. These detailed statistical descriptions are given in Appendix III.

Inspection of program ranges, means and standard deviations indicates substantial similarities between programs and grade levels on the six theoretical dimensions. On the quartile scoring scale, all programs were found in the moderate-to-high emphasis range (22-33) on the Spoken Analogue, Reconstruction of Message, Construction of Knowledge, and Text-controlled dimensions. On the Teacher-controlled dimension, three programs were in the moderate-to-high emphasis range (22-33), and two programs fell into the low-to-moderate emphasis range (12-22). On the Reader-controlled dimension, four programs were found on the low end of the low-to-moderate emphasis range (12-22), and one program fell into the low emphasis range (0-11). Grade level comparisons were similar. On the quartile scoring scale,

all grade levels were found in the moderate-to-high emphasis range (22-33) on the Spoken Analogue, Reconstruction of Message, Construction of Knowledge, and Text-controlled dimensions. On the Teacher-controlled dimension, one grade level (4) was found on the low end of the moderate-to-high emphasis range (22-33), and two grade levels were found in the low-to-moderate emphasis range (12-22). On the Reader-controlled dimension, two grade levels were found on the low end of the low-to-moderate emphasis range (12-22), and one grade level (6) fell into the low emphasis range. Summary comparisons are exhibited in Table 3. Full statistical descriptions are given in Appendix III.

Evaluator holistic program ratings on the 1-5 scale tended to be moderately high for the five programs. There were no ratings of 1, and 52% of the evaluators rated their program at 4. These ratings are exhibited in Table 4. Program II, Reading Unlimited, and Program III, Holt Basic Reading System, received the highest holistic ratings. Program I, Be a Better Reader, and Program V, Open Court Correlated Language Arts Program, received the lowest holistic ratings. Program IV, Reading 360, was in the middle.

Program Comparisons of Theoretical Dimensions

Statistical comparisons of the five programs and three grade levels on the six theoretical dimensions were undertaken. Individual analyses on each of the six dimensions were carried out using 5x3 factorial analyses of covariance (ANCOVAs) for the five programs at three grade levels. Knowledge of terminology, as measured by the terminology test score, and years of teaching experience were used as covariates. Assumptions of linear and parallel regression of the six dependent variables on the two covariates were satisfied by inspection of scatter plots. The assumption of homogeneous within-cell variance was satisfied by the condition of equal cell sizes.

On the Spoken Analogue dimension, a significant difference was found between the adjusted means for the five programs, $F(4,88) = 2.92$, $p < .026$. No significant

Table 3

Ranges (0-45), Means, and Standard Deviations for

Programs and Grade Level Components on Six Theoretical Dimensions

Dimensions Key: SA = spoken analogue, RM = reconstruction of message, CK = construction of knowledge, TX = text controlled, TR = teacher controlled, RDR = reader controlled

Program Key: BBR = Be a Better Reader, RU = Reading Unlimited, HBRS = Holt Basic Reading System, R360 = Reading 360, OC = Open Court Correlated Language Arts Program

I. Dimensions by Programs

Theoretical Dimension	Lowest in Range	Highest in Range	5 Program Mean	Standard Deviation*
SA	24.67 (RU)	28.43 (BBR)	26.42	1.68
RM	29.90 (OC)	32.76 (RU)	31.33	1.14
CK	24.08 (BBR)	30.27 (RU)	28.27	2.50
TX	28.29 (OC)	32.29 (HBRS)	29.65	1.63
TR	16.29 (BBR)	24.30 (R360)	21.60	3.59
RDR	10.84 (BBR)	14.69 (RU)	12.84	1.58

II. Dimensions by Grade Level 4 Components

Theoretical Dimension	Lowest in Range	Highest in Range	Grade Level Mean	Standard Deviation*
SA	24.29 (BBR)	30.89 (R360)	27.74	5.26
RM	29.57 (OC)	34.29 (RU)	30.74	2.00
CK	24.03 (BBR)	32.48 (RU)	28.64	3.16
TX	29.00 (BBR)	35.59 (HBRS)	31.59	2.70
TR	15.12 (BBR)	28.89 (RU)	23.76	5.50
RDR	11.08 (BBR)	19.80 (RU)	15.09	3.46

Table 3 (cont.)

III. Dimensions by Grade Level 5 Components

Theoretical Dimension	Lowest in Range	Highest in Range	Grade Level Mean	Standard Deviation*
SA	22.73 (R360)	31.47 (BBR)	26.19	3.25
RM	27.29 (OC)	33.57 (HBRS)	31.65	2.58
CK	25.52 (OC,RU)	31.49 (R360)	27.54	2.68
TX	26.64 (R360)	31.35 (HBRS)	28.47	2.14
TR	15.12 (BBR)	26.46 (R360)	20.63	4.49
RDR	11.08 (BBR, HBRS)	13.91 (RU)	12.21	1.45

IV. Dimensions by Grade Level 6 Components

Theoretical Dimension	Lowest in Range	Highest in Range	Grade Level Mean	Standard Deviation*
SA	22.34 (OC)	29.53 (BBR)	25.33	3.21
RM	30.29 (BBR)	32.86 (OC)	31.60	0.93
CK	22.21 (BBR)	32.81 (RU)	28.64	4.12
TX	27.11 (OC)	31.11 (BBR)	28.90	1.65
TR	17.82 (OC)	24.03 (HBRS)	20.41	2.96
RDR	10.37 (BBR, RU, HBRS)	13.44 (OC)	11.22	1.34

*of program means

Table 4

Evaluator Holistic Ratings (1-5)

Program	Rating					
	1.	2.	3.	4.	5.	Total
I. Be a Better Reader	0	5	7	8	1	68
II. Reading Unlimited	0	1	2	15	3	83
III. Holt Basic Reading	0	1	2	17	1	81
IV. Reading 360	0	3	8	10	0	70
V. Open Court	0	8	8	5	0	60
Total	0 (0%)	18 (17%)	27 (26%)	55 (52%)	5 (5%)	

differences were found between the adjusted means of the three grade levels, $F(2,88) = 1.34$, NS. No significant interaction of program by grade level was found, $F(8,88) = 1.66$, NS. A full summary table is given in Appendix IV. Follow-up multiple comparison t-tests of adjusted (least square) program means indicated no significant program differences at the $p < .05$ level, but at the $p < .10$ level the program with the lowest adjusted mean, Reading Unlimited, was significantly lower than the program with the highest adjusted mean, Holt Basic Reading System. At the $p < .15$ level the adjusted mean for the Reading Unlimited program was also significantly lower than the adjusted mean for the Be a Better Reader program. The remaining comparisons revealed no significant differences. The alpha level for these tests was adjusted for error rate per experiment (Ryan, 1959).

On the Reconstruction of Message dimension, no significant differences were found between the adjusted means of the five programs $F(4,88) = 1.57$, NS. No significant differences were found between the adjusted means of the three grade levels, $F(2,88) = 0.61$, NS. No significant interaction of program by grade level was found, $F(8,88) = 1.56$, NS. A full summary table is given in Appendix IV.

On the Construction of Knowledge dimension, a significant difference was found between the adjusted means of the five programs, $F(4,88) = 4.00$, $p < .005$. No significant differences were found between the adjusted means for the three grade levels, $F(2,88) = .351$, NS. No significant interaction of program by grade level was found, $F(8,88) = 1.64$, NS. A full summary table is given in Appendix IV. Follow-up multiple comparison t-tests of adjusted (least square) program means indicated that the program with the lowest adjusted mean, Be a Better Reader, was significantly lower at the $p < .05$ level than the programs with the highest adjusted means, Reading 360 and Reading Unlimited, respectively. At the $p < .08$ level the adjusted mean for the Be a Better Reader program was also significantly lower than the adjusted mean for the Holt Basic Reading System. The remaining comparisons revealed no significant differences. The alpha level for these tests was adjusted for error rate per experiment.

On the Text-controlled dimension, no significant differences were found between the adjusted means of the five programs, $F(4,88) = 2.34$, NS. A significant difference was found between the adjusted means of the three grade levels, $F(2,88) = 3.33$, $p < .041$. No significant interaction of program by grade level was found, $F(8,88) = .756$, NS. A full summary table is given in Appendix IV. Follow-up multiple comparison t-tests of adjusted (least square) grade level means indicated that the lowest adjusted mean, grade level 5, was significantly lower on this dimension at the $p < .055$ level than the highest adjusted mean, grade level 4. At the $p < .15$ level the adjusted mean for grade level 4 was also significantly higher than the adjusted mean for grade level six. No significant difference was found between grade levels five and six. The alpha level for these tests was adjusted for error rate per experiment.

On the Teacher-controlled dimension, a significant difference was found between the adjusted means of the five programs, $F(4,88) = 4.89$, $p < .001$. No significant differences were found between the adjusted means of the three grade levels $F(2,88) = 2.28$, NS. No significant interaction of program by grade level was found, $F(8,88) = 1.27$, NS. A full summary table is given in Appendix IV. Follow-up multiple comparison t-tests of adjusted (least square) program means indicated that the program with the lowest mean, Be a Better Reader, was significantly lower on this dimension at the $p < .05$ level than the three programs with the highest adjusted means, Reading 360, Holt Basic Reading System, and Reading Unlimited, respectively. The remaining comparisons revealed no significant differences. The alpha level for these tests was adjusted for error rate per experiment.

On the Reader-controlled dimension, no significant differences were found between the adjusted means of the five programs, $F(4,88) = 0.98$, NS. No significant differences were found between the adjusted means of the three grade levels $F(2,88) = 2.49$, NS. No significant interaction of program by grade level was found, $F(8,88) = 0.59$, NS. A full summary table is given in Appendix IV.

Comparison of Specific Activity or Approach Variables

Five categories of activities and approaches were selected for in-depth analysis of program and grade level similarities and differences. Three categories were selected from the Reading-Language activities and approaches: (1) Program Focus, (3) Language Unit Emphasized, and (5) Level of Comprehension. Two categories were selected from the Teaching-Learning activities and approaches: (6) Locus of Control and Purpose for Reading, and (8) Role of the Teacher. These categories lend themselves to analysis because each inclusive activity or approach addresses only one theoretical dimension and therefore analysis would be more clearly interpretable. These activities and approaches were rated on a 0-3 scale. Summarized descriptive statistics for these variables are given in Table 5.

The Program Focus category was selected for analysis on the rationale that the inclusive variables would characterize the general nature of the programs. The Profile Instrument identified six possible program foci: Matching Sounds and Letters, Whole Word Identification, Word Meaning Recognition, Syntactic Reconstruction, Meaning Reconstruction, and Knowledge Construction. A 5x3 multivariate analysis of covariance (MANCOVA) was undertaken with five programs and three grade levels as independent variables, the mean vector of the six program foci as the dependent variable, and terminology test score and years of experience as covariates.

Using the Wilk's criterion, a significant difference was found between the adjusted mean vectors of the five programs, $F(24,290) = 3.16$, $p < .0001$. No significant differences were found between the adjusted mean vectors of the three grade levels, $F(12,166) = 1.54$, NS. A significant interaction of program by grade level was found, $F(48,412) = 1.58$, $p < .01$. Follow-up univariate 5x3 ANCOVAs were undertaken on each of the six Program Focus variables. Alpha level for these ANCOVAs was adjusted for error rate per experiment.

A significant difference on the ANCOVA for the Matching Sounds and Letters variable was found between programs $F(4,88) = 6.43$, $p < .002$. Follow-up multiple comparison t-tests of adjusted (least square) program means indicated that the

Table 5

Means and Standard Deviations for Specific Activity or Approach Variables Summarized for All Program Components

Category and Variable	Mean (Range = 0-3)	Standard Deviation
1. Program Focus		
a. Matching sounds and letters	1.66	1.08
b. Whole word identification	1.83	1.02
c. Word meaning recognition	2.37	0.78
d. Syntactic reconstruction	1.48	1.10
e. Meaning reconstruction	2.38	0.73
f. Knowledge construction	2.54	0.71
3. Language Unit Emphasized		
a. Sub-word	2.06	0.93
b. Word	2.45	0.77
c. Phrases, clauses, sentences	2.33	0.77
d. Passage, story, chapter	2.35	0.87
e. Entire book or content area	1.27	1.12
5. Level of Comprehension		
a. Literal	2.65	0.62
b. Inferential	2.72	0.53
c. Evaluative	2.32	0.77
d. Appreciative	2.04	0.92
6. Locus of Control and Purpose for Reading		
a. Text-determined	2.83	0.38
b. Teacher-determined	1.35	0.83
c. Student-determined	0.57	0.76
7. Role of the Teacher		
a. Passive	2.11	1.06
b. Active	1.53	0.88
c. Interactive	1.36	0.96

Be a Better Reader program had a significantly higher ($p < .05$) adjusted mean rating, 2.36, than both the Reading 360 program, which had an adjusted mean rating of 1.03, and the Reading Unlimited program, which had an adjusted mean rating of 1.47. The Reading 360 program was also found to have a significantly lower ($p < .05$) adjusted mean rating than the Holt Basic Reading System, which had an adjusted mean rating of 1.87. Alpha levels for these tests were adjusted for error rate per experiment.

A marginally significant interaction on the ANCOVA for the Word Meaning Recognition variable was found between program and grade level, $F(8,88) = 2.77$, $p < .055$. Follow-up multiple comparison t-tests of adjusted (least square) means for all program components indicated that the Reading 360 program at grade level 4 had a significantly lower ($p < .05$) adjusted mean rating, 1.29, than the adjusted mean ratings for four other program components, respectively: Open Court at grade level 5, 2.88; Holt Basic Reading System at grade level 5, 2.85; Reading 360 at grade level 6, 2.71; and Open Court at grade level 6, 2.71. Alpha levels for these tests were adjusted for error rate per experiment.

A significant difference on the ANCOVA for the Syntactic Reconstruction variable was found between programs, $F(4,88) = 4.62$, $p < .01$. Follow-up multiple comparison t-tests of adjusted (least square) program means indicated that the Reading 360 program had a significantly lower ($p < .05$) adjusted mean rating, 0.84, than both the Holt Basic Reading System, which had an adjusted mean rating of 2.09, and the Open Court program, which had an adjusted mean rating of 1.74. Alpha levels for these tests were adjusted for error rate per experiment.

A significant difference on the ANCOVA for the Knowledge Construction variable was found between program means, $F(4,88) = 3.97$, $p < .03$. Follow-up multiple comparison t-tests of adjusted (least square) program means indicated that the Be a Better Reader program had a significantly lower ($p < .05$) adjusted mean rating, 2.04, than the adjusted mean ratings of three other programs, respectively: Open Court, 2.73; Holt Basic Reading System, 2.72; and Reading 360, 2.70. Alpha levels for these tests were adjusted for error rate per experiment.

No other significant differences in program, grade level, or program by grade level interaction were found in the follow-up ANCOVAs on the six variables in the Program Focus category.

The Language Unit Emphasized category was selected for analysis on the assumption that programs stressing decoding would emphasize smaller language units, and programs stressing comprehension would emphasize larger language units. Five levels of language unit were identified in the Profile Instrument: Sub-word; Word; Phrase, Clause or Sentence; Paragraph; Passage, Story, or Chapter; and Entire Book or Content Area. A 5x3 multivariate analysis of covariance (MANCOVA) was undertaken with five programs and three grade levels as independent variables, the mean vector of five levels of language unit as the dependent variable, and terminology test score and years of experience as covariates.

Using the Wilk's criterion, a significant difference was found between the adjusted mean vectors of the five programs, $F(24,290) = 2.03$, $p < .004$. No significant difference was found between the adjusted mean vectors of the three grade levels, $F(12,166) = 1.56$, NS. No significant interaction of program by grade level was found, $F(48,412) = 1.13$, NS. Follow-up univariate 5x3 ANCOVAs were undertaken on each of the five levels of language unit. Alpha levels for these analyses were adjusted for error rate per experiment. A significant difference on the Sub-word level was found between programs $F(4,88) = 3.91$, $p < .03$. No significant differences were found in any of the other follow-up ANCOVAs. A Duncan's multiple range test was undertaken on unadjusted Sub-word means (as covariates had no statistically significant effects in the ANCOVA). The Duncan's test indicated that the Reading 360 program had a significantly higher ($p < .05$) mean rating, 2.48, on Sub-word activities than two other programs, and the Reading Unlimited program had a significantly lower ($p < .05$) mean rating, 1.57, on Sub-word activities than three other programs. The other means did not differ significantly on this variable.

The Level of Comprehension category was selected for analysis to determine if any programs or grade level components put greater emphasis on lower levels of comprehension or on higher levels of comprehension. Four levels of comprehension

were identified in the Profile Instrument: Literal, Inferential, Evaluative, and Appreciative. A 5x3 MANCOVA was undertaken with five programs and three grade levels as independent variables, the mean vector of four levels of comprehension as the dependent variable, and terminology test score and years of experience as covariates.

Using the Wilk's criterion, a significant difference was found between the adjusted mean vectors of the five programs $F(16,260) = 2.69$, $p < .0006$. No significant difference was found between the adjusted mean vectors of the three grade levels, $F(8,170) = 1.44$, NS. No significant interaction of program by grade level was found, $F(32,315) = 1.04$,NS. Follow-up univariate 5x3 ANCOVAs were undertaken on each of the four levels of comprehension. Alpha levels for these analyses were adjusted for error rate per experiment. A significant difference on the Appreciative Comprehension level was found between programs $F(4,88) = 5.02$, $p < .005$. No significant differences were found in any of the other follow-up ANCOVAs. A Duncan's multiple range test was undertaken on unadjusted Appreciative Comprehension means (as covariates had no statistically significant effects in the ANCOVA). The Duncan's test indicated that the Reading 360 program had a significantly higher ($p < .05$) mean rating, 2.52, on Appreciative Comprehension than the other programs, and the Be a Better Reader program had a significantly lower ($p < .05$) mean rating, 1.48, on Appreciative Comprehension than the other programs. The other means did not differ significantly on this variable.

The Locus of Control and Purpose for Reading category was selected for analysis on the assumption the programs leaning toward direct instruction would emphasize more text and teacher determined activities and approaches, while programs leaning toward open instruction would emphasize more student determined activities and approaches. Three centers of locus of control and purpose for reading were identified in the Profile Instrument: Text, Teacher, and Student. A 5x3 MANCOVA was undertaken with five programs and three grade levels as independent variables, the mean vector of the three centers of locus of control and purpose for reading as the dependent variable, and terminology test score and years of experience as covariates.

Using the Wilk's criterion, no significant difference was found between the adjusted mean vectors of the five programs, $F(12,227) = 1.13$, NS. No significant difference was found between the adjusted mean vectors of the three grade levels, $F(6,172) = 1.19$, NS. No significant interaction of program by grade level was found, $F(24,250) = 0.95$, NS.

The Role of the Teacher category was selected for analysis to determine if any programs put more emphasis on the teacher being either passive to the program, an active agent, or interactive with students. Three roles were identified in the Profile Instrument: Passive, Active, or Interactive. A 5x3 MANCOVA was undertaken with five programs and three grade levels as independent variables, the mean vector of three teaching roles as the dependent variable, and terminology test score and years of experience as covariates.

Using the Wilk's criterion, a significant difference was found between the adjusted mean vectors of the five programs, $F(12,227) = 2.25$, $p < .01$. No significant difference was found between the adjusted mean vectors of the three grade levels, $F(6,172) = 1.23$, NS. No significant interaction of program by grade level was found, $F(24,250) = 0.84$, NS. Follow-up univariate 5x3 ANCOVAs were undertaken on each of the three roles of the teacher. Alpha levels for these analyses were adjusted for error rate per experiment. Significant program differences were found on the Passive role, $F(4,88) = 3.96$, $p < .02$, and on the Interactive role, $F(4,88) = 4.20$, $p < .015$. A Duncan's multiple range test was undertaken on unadjusted Passive role means (as the covariates had no statistically significant effects in the ANCOVA). The Duncan's test indicated that the Be a Better Reader program had a significantly higher ($p < .05$) mean rating, 2.76, on the Passive role than all the remaining programs except the Holt Basic Reading System, which had a mean rating of 2.29. The other means did not significantly differ on this variable. A Duncan's test was also undertaken on unadjusted Interactive role means (as the covariates had no statistically significant effects in the ANCOVA). The Duncan's test indicated that the Be a Better Reader program had a significantly lower ($p < .05$) mean rating,

0.67, on the Interactive role than all the remaining programs. The other means did not significantly differ on this variable.

V. Findings and Interpretation

Program Comparison

A principal finding revealed by data analysis is the similarity of the five reading programs, both in the theoretical dimensions and in the specific variables. In the great majority of cases the covaried means of the programs and grade levels were not significantly different, and even fewer significant interactions of program by grade level were found. As assessed in this study, these programs are remarkably alike.

In comparing the five programs at three grade levels across the six theoretical dimensions (90 means), only five clearly significant statistical differences were found. Five other differences were marginally statistically significant, with probabilities ranging from $p < .055$ - $p < .15$. On the Construction of Knowledge and Teacher-controlled dimensions, the Be a Better Reader Program was rated significantly or marginally lower than several of the other programs. On the Spoken Analogue dimension, the Reading Unlimited program was rated marginally lower than two other programs. On the Text-controlled dimension, grade level 4 components were rated marginally higher than grade level 5 and grade level 6 components. No other significant differences or interactions were found on these dimensions.

In comparing the five programs at three grade levels across 22 specific variables (330 means), 32 statistically significant differences were found. In the Program Focus category, significant differences were found on the Matching Sounds and Letters variable, the Word Meaning Recognition variable, the Syntactic Reconstruction variable, and the Knowledge Construction variable. On the Matching Sounds and Letters variable, the Be a Better Reader program was rated significantly

higher than two other programs, and the Reading 360 program was rated significantly lower than two other programs. On the Word Meaning Recognition variable, the Reading 360 grade level 4 component was rated significantly lower than the grade level 5 and/or grade level 6 components of some other programs. On the Syntactic Reconstruction variable, the Reading 360 program was rated significantly lower than two other programs. On the Knowledge Construction variable, the Be a Better Reader Program was rated significantly lower than three other programs. In the Language Unit Emphasized category, the Reading 360 program was rated significantly higher than two other programs on the Sub-word variable. The Reading Unlimited program was rated significantly lower than three other programs on the Sub-word variable. In the Level of Comprehension category, the Reading 360 program was rated significantly higher, and the Be a Better Reader program was rated significantly lower, than the other programs on the Appreciative Comprehension variable. In the Role of the Teacher category, the Be a Better Reader program was rated significantly higher than three other programs on the Passive variable. The Be a Better Reader program was rated significantly lower than four other programs on the Interactive variable.

No other significant differences or interactions were found on the specific activity and approach variables. While the 22 specific variables compared make up only a third of all the specific variables on the Profile Instrument, the overlapping concepts used in addressing the theoretical dimensions in the study make them essentially representative of many of the remaining variables. To the extent that this representativeness exists, these five reading programs are very similar in many specific details.

The differences observed tend to be uniformly spread throughout the broad dimensions and the specific variables analyzed. On the three Reading-Language dimensions (Spoken Analogue, Reconstruction of Message, Construction of Knowledge) five significant or marginally significant differences were found in the 45 means

compared, for a differential proportion of 11%. On the specific variables relating to those three dimensions 25 significant differences were found in 240 means compared, for a differential proportion of 10%. Similarly, on the three Teaching-Learning dimensions (Text-controlled, Teacher-controlled, Reader-controlled) five significant or marginally significant differences were found in the 45 means compared, for a differential proportion of 11%. On the specific variables relating to these three dimensions, seven significant differences were found in 90 means compared for a differential proportion of 8%. To the extent that the specific variables describe the dimensions to which they theoretically relate, the analysis of the specific variables corroborates and confirms the analysis of the broad theoretical dimensions.

To check the validity of the relationship between the specific variables and the theoretical dimensions, zero-order correlations were computed for each of the 65 variables with each of the six dimensions. In all but five of the resulting correlations, the highest significant positive correlation was found on the dimension that was directly addressed by the variable on the Profile Instrument. The logical consistency of these correlations suggests that the specific variables validly describe their theoretically concordant dimensions, and allows for inferencing between the findings on specific variables and on the theoretical dimensions. A complete listing of these correlations is given in Appendix V.

The finding of close conformity among the reading programs in this study allows for a general summary description. Typically, these five middle-grade reading programs:

1. place moderate emphasis on producing the spoken analogue of an author's printed language;
2. place moderately high emphasis on the reconstruction of an author's message;
3. place moderate emphasis on the construction of knowledge about or beyond an author's message;

4. substantially emphasize words, but also emphasize passages, stories, and chapters; phrases, clauses, and sentences; and sub-word language units, and tend to de-emphasize the reading of entire books or the study of broad content areas;
5. tend to emphasize literal and inferential levels of comprehension somewhat more than evaluative and appreciative levels of comprehension;
6. take a text-controlled approach more than inviting teacher input in activities;
7. have still more text-controlled activities at the fourth grade level than at the fifth or sixth grade levels;
8. de-emphasize reader-controlled activities.

One program in the study seemed to significantly deviate from the others in enough instances to warrant exception. The Be a Better Reader program was found to be significantly lower than most other programs on the Construction of Knowledge and Teacher-controlled dimensions, and on the Appreciative Comprehension, Knowledge Construction, and Interactive (role of the teacher) variables. This program was also found to be significantly higher than some other programs on the Spoken Analogue dimension and on the Matching Sounds and Letters and Passive (role of the teacher) variables. This program appears to be somewhat more oriented than the others to text control and lower levels of comprehension. Perhaps significantly, the Be a Better Reader program received one of the lowest total holistic ratings from the evaluators.

Other distinctions between programs were not pronounced, but some trends were perceptible. The Reading Unlimited program was significantly higher than some other programs on the Construction of Knowledge and Teacher-controlled dimensions. It was also significantly lower than some other programs on the Spoken Analogue dimension and on the Sub-word and Matching Sounds and Letters variables. This

program appears to be slightly more oriented than some other programs to teacher control and the higher level comprehension of larger language units. The Reading Unlimited program received the highest holistic rating from the evaluators.

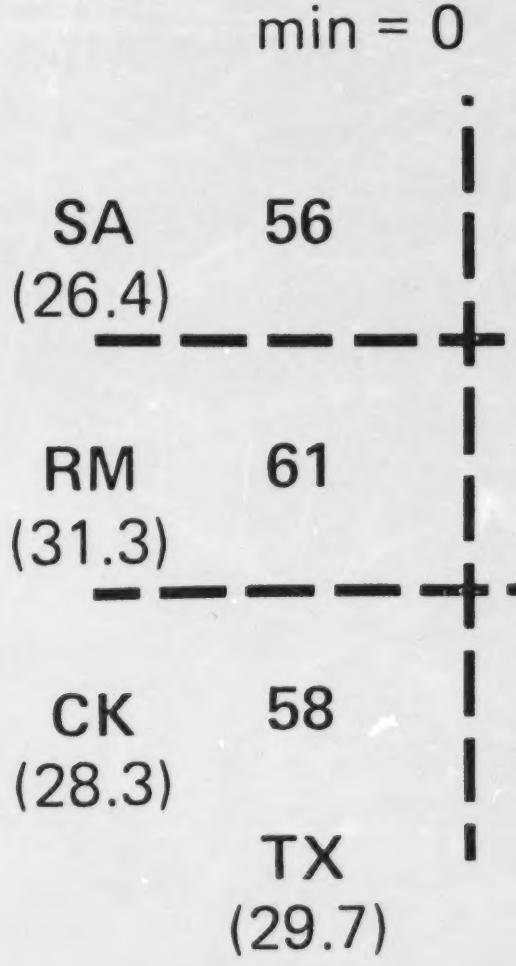
The Reading 360 program had a number of statistical differences associated with it, but mixed trends are in evidence. This program was significantly higher than some other programs on the Construction of Knowledge and Teacher-controlled dimensions, and on the Appreciative Comprehension and Knowledge Construction variables. However, it was also significantly higher than some other programs on the Sub-word variable, while being significantly lower than others on the Matching Sounds and Letters variable. It was also significantly lower than others on the Syntactic Reconstruction variable, and on the Word Meaning Recognition variable at grade level 4 only. This array of relationships might be explained by the use in this program of nine "strands" interwoven throughout the program which reflect objectives ranging from decoding to creativity development. Information in the teacher's guides suggests that decoding in the higher grade levels of the program focuses more on the morphemic structural analysis of words than on phonemic analysis, tending to account for the relatively high rating on the Sub-word variable and the relatively low rating on the Matching Sounds and Letters variable. While this program appears to be generally related to higher levels of comprehension, it is left to individual judgement to determine whether it is coherently eclectic, or simply going in many directions at once. The Reading 360 program was given a middle range holistic rating by the evaluators.

The Holt Basic Reading System and Open Court Correlated Language Arts program had too few significant differences associated with them to attempt to discern trends. Interestingly, however, the Holt program was rated second highest by evaluators, while the Open Court was rated lowest. Possible explanations for these ratings are discussed later.

Underlying Program Structure

The theoretical data reduction used in this study coupled with the similarity of the programs employed yields a valuable opportunity to assess the underlying structure of the typical middle-grade basal reading program, insofar as the sample of basal readers used in this study is typical.

A graphic description of this underlying structure can be generated by using the theoretical dimension matrix displayed in Figure 3. By placing dimension means at the edges of the respective rows and columns in the matrix, and by adding these figures at each intersection, a hypothetical index of the emphasis given to each of the frames in the matrix can be calculated. The theoretical dimensions matrix with these calculations is exhibited in Figure 5. For purposes of comparison, the sums have been rounded to the nearest whole. As each dimension was rated on a 0-45 scale, the minimum for each frame is zero and the maximum is ninety. An asterisk is used to denote the intersection of two dimensions on which noteworthy statistically significant differences between programs was found, indicating that the variance associated with this frame is somewhat greater than the others. It is critical to note that the calculations in this matrix do not represent the actual number of activities fitting the description of each frame that would be found in a typical middle-grade basal reader. These numbers represent theoretical weights. Nor are the dimensions equally weighted for each calculation; one dimension might account for well over half the summed total for a frame. For example, the intersection of the SA and RDR dimensions produces a sum of 39, the lowest sum in the matrix. This number could be interpreted to mean that relatively few activities involving the students' choice of printed matter for purposes



* increased variance here

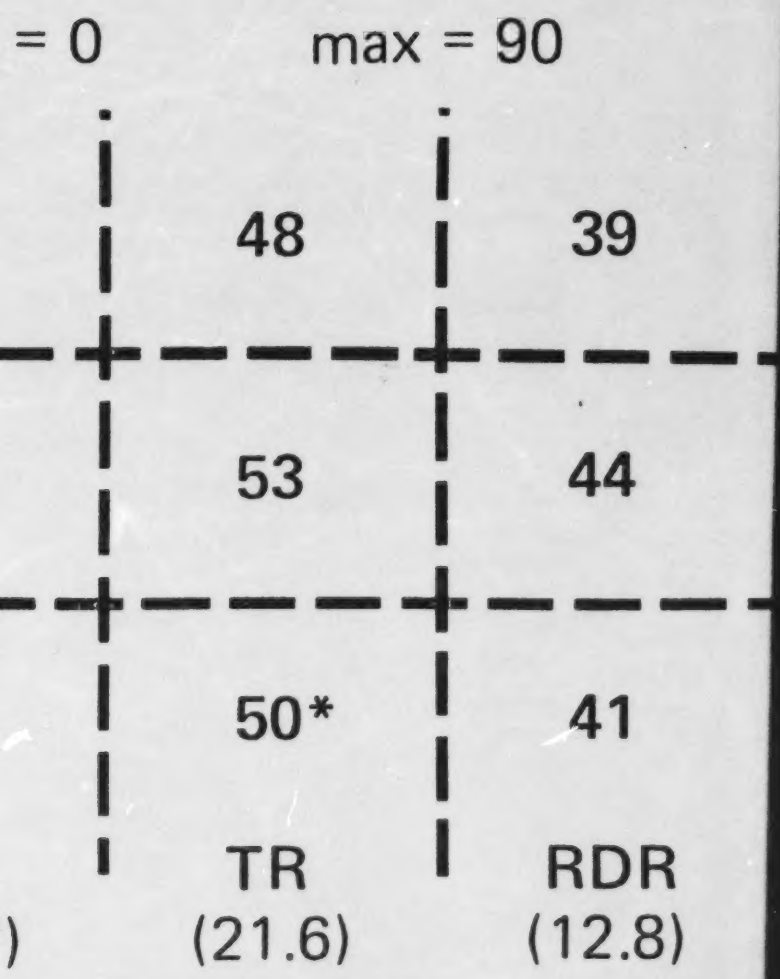


Figure 5

of converting it into its spoken counterpart would be found in the typical middle-grade basal reader. Examples of such activities might be students selecting poetry to read simply to experience the rhythms of the language, or students selecting their own choral readings without concern for understanding the readings at higher levels of comprehension. In actual basals, few such reader-controlled activities would likely be found, and in some basals, none. The fact that the SA dimension accounts for two-thirds of the sum for the frame would tend to suggest this state of affairs. Conversely, the highest sum, 61, is found at the intersection of the RM and TX dimensions. This could be interpreted to mean that relatively many activities involving text-directed reading comprehension at the literal and inferential levels would be found in the typical middle-grade basal reader. Since both dimensions account for about half the sum, such activities would more likely be found in actual basals.

An overview of the calculations in Figure 5 yields a graphic summary of the theoretical trends in this study. The variety of numerical weights in many of the frames invites an investigation for an underlying structure in those trends. To search into this structure more clearly, a factor analysis of the theoretical dimensions data was undertaken. Principal components factoring was applied to the six dimensions. Using an eigenvalue criterion of 1.00, two significant factors were extracted and rotated to an orthogonal solution using the varimax procedure. The resulting factor matrix is given in Table 6. Full information, including the original correlation matrix, eigenvalues, variance accounted for, and varimax rotated factor matrix with communalities is given in Appendix VI. Using a .35 loading criterion, factor I receives

Table 6

Factor Analysis of Theoretical Dimensions

Dimension	Factor I	Factor II
SA	0.324	0.758
RM	0.696	0.075
CK	0.788	0.025
TX	0.048	0.879
TR	0.703	0.152
RDR	0.795	0.146

significant loadings from the RM, CK, TR, and RDR dimensions. Its highest loadings are from the CK and RDR dimensions. Factor II receives high significant loadings from the SA and TX dimensions.

These factors define two underlying constructs in the reading instruction typified by the programs in this study. One factor defines a set of approaches and activities most characterized by a Reader-controlled Construction of Knowledge emphasis. The second factor defines a set of approaches and activities most characterized by a Text-controlled Spoken Analogue emphasis. These factors bear a marked resemblance to the holistic-functional and subskills approaches discussed earlier (Reed & Ward,1982). The fact that both factors account for substantial amounts of variance indicates the obvious eclecticism of these basal readers. That factor I accounts for more variance than factor II indicates that these basals differ (to the extent that they differ at all) primarily on their leanings toward the holistic-functional approach. The loadings on these factors further indicate that as the text materials assume more control, attention to input from print in the reading transaction increases and more emphasis is given to decoding to speech. Conversely, as teachers and readers assume more control, attention to input from the reader increases and more emphasis is given to contructing knowledge about or beyond an author's message.

A geometric depiction of this factorial structure can be imposed on Figure 5 that rationally illustrates the opposing theoretical positions found in contemporary reading instruction. If two opposing triangles are drawn with bases facing a central diagonal that extends from lower-left to upper-right, the two underlying contructs are dilineated. The opposite apexes of

these triangles describe the most distinctive differences between the constructs, i.e., a Text-controlled Spoken Analogue emphasis versus a Reader-controlled Construction of Knowledge Emphasis. This depiction is given in Figure 6. The generally higher numbers in the upper left triangle indicate that the reading instruction exemplified by the programs studied here puts substantially more emphasis on the Text-controlled Spoken Analogue construct.

VI. Reliability, Validity, and Limitations

Reliability

Alpha reliability coefficients were generated for each program on the variable scales comprising each of the theoretical dimensions, and for the overall reliability of each of the dimensions. These coefficients are given in Table 8. An average of the reliabilities for the six dimensions yields a mean overall reliability of .607 with a standard deviation of .132. An average of the reliabilities for the reading-language dimensions yields a mean of .600, and an average of the reliabilities for the teaching-learning dimensions yields a mean of .613. Measurement using the profile instrument under conditions present in this study appears to have a moderate level of reliability.

Two factors need to be considered in interpreting these reliability estimates. One factor involves the degree of evaluator precision elicited in this study. The variables that comprise the theoretical dimensions were rated on a 0-3 scale. While this narrow range has practical efficiency, precision in measurement is somewhat sacrificed: one evaluator's "1" might easily be another evaluator's "2." Another constraint on reliability involves time: the evaluators in the study used intuitive judgements rather than actually counting activities

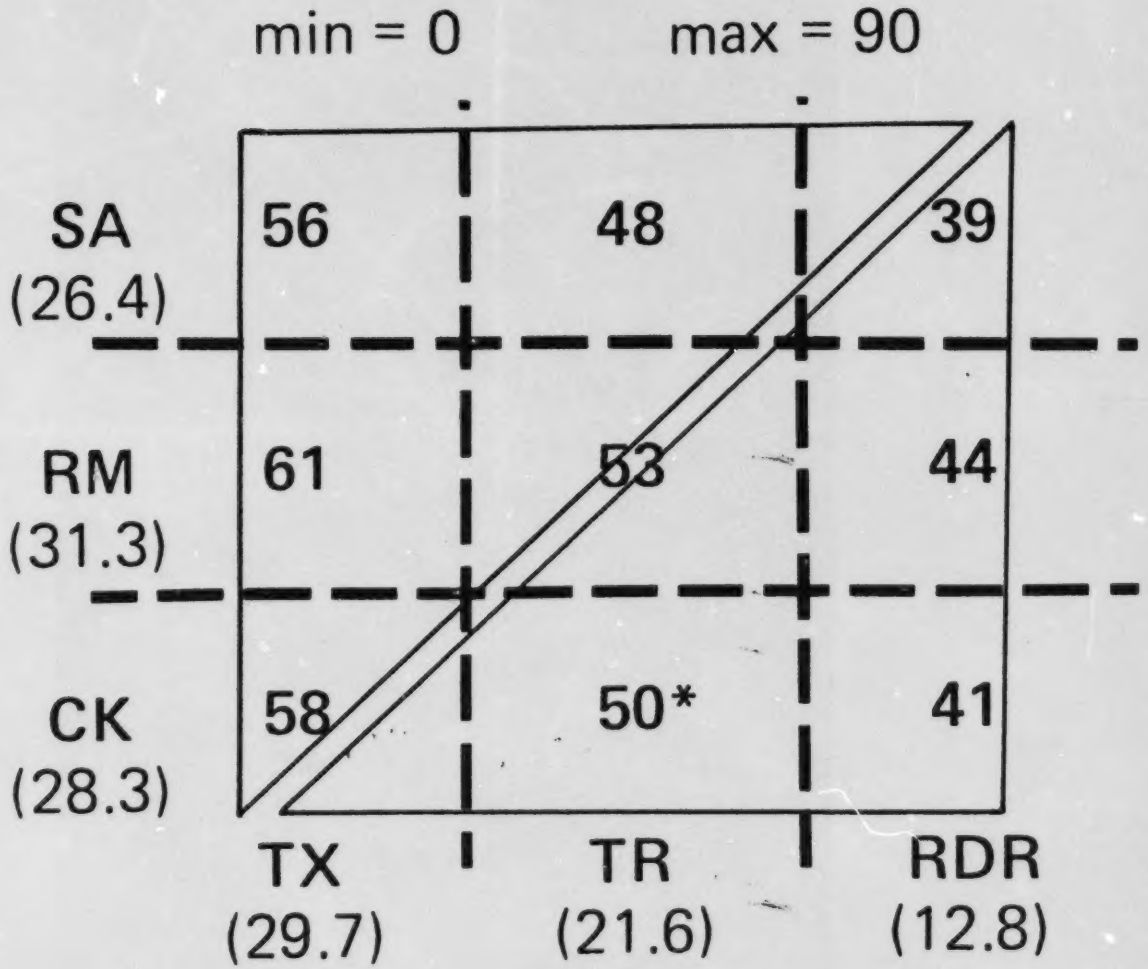


Figure 6

* increased variance here

Table 7

Coefficient Alpha Reliabilities for Theoretical Dimensions by Program and Overall

Program	Dimension					
	SA	RM	CK	TX	TR	RDR
BBR	.717	.567	.811	-.042	.708	.698
RU	.848	.650	.689	.431	.741	.847
HBRS	.340	.600	.680	.537	.520	.405
R360	.521	.191	.485	.254	.562	.702
OC	.336	.386	.653	.652	.792	.767
Mean	.553	.479	.664	.367	.665	.684
S.D.	.228	.189	.117	.272	.118	.168
# of items	11	15	13	9	8	9
Overall alpha	.609	.481	.711	.412	.716	.710

Overall mean # of items 10.83
Overall mean alpha .607

Program Key: BBR = Be a Better Reader
RU = Reading Unlimited
HBRS = Holt Basic Reading System
R360 = Reading 360
OC = Open Court Correlated Language Arts Program

in assigning their ratings. The evaluations were done in three hour time periods in order to simulate the actual conditions that teachers often face in selecting such materials. To a degree, a trade-off was made between accuracy and efficiency in this way. Still another constraint in this area involves terminology. While written definitions were provided for the variables in this study, different evaluator backgrounds effect distinctions. Some terms in reading education are easily agreed upon, others seem to defy consensus. An effort was made to compensate for error variance from this source through the use of covariance in the statistical analyses, but no such compensation was made in estimating reliability.

A second factor involves the nature of reliability estimation. The total estimate of reliability in this study is given as the mean of six separate dimension scales. A primary constraint on reliability here is the number of items in each of the dimension scales. Scales with few items seldom produce high reliabilities: a coefficient of .80 or more usually requires twenty to thirty homogeneous items to obtain (Nunnally, 1978). The dimension scales in this study range in length from nine items to fifteen items, with a mean of 10.8 items. Hence, the effect of random and chance errors looms large. Another possible constraint on reliability involves the choice from alternative models of reliability assessment. Coefficient alpha was selected here because it is the basic method for determining reliability based on internal consistency, using the sampling of content as the major source of measurement error. However, the alpha model may not be the most appropriate one for use with linear combinations of somewhat varying traits. The dimension scales in this study are essentially theoretical rather than empirical, and substantial correlations

are found between some dimensions (see Appendix VI). Summing items which measure differing domains calls for a modified approach to reliability which tends to increase reliabilities over that which would be predicted from coefficient alpha (Nunnally, 1978). The correlations exhibited in Appendix V tend to suggest that the theoretical dimensions posited here are generally separate entities, in that the dimension addressed by each item is in virtually all cases the highest correlate. Hence, coefficient alpha seems the appropriate basic model, but may be seen here as a conservative estimate of reliability.

Considering the constraints imposed on reliability by scoring range, evaluator subjectivity, scale length, model choice, and concessions to practical matters, the reliabilities observed in Table 8 are seen as acceptable for empirical use, and conservative estimates of the measurement possibilities in this area.

Validity

Three types of validity are examined for this research: content validity, criterion-related validity, and construct validity (Isaac and Michael, 1971; Nunnally, 1978).

The content validity of this research is based on summative reviews of the professional literature of reading instruction, and on examination of major national and international trends. The variables assessed are amply represented in this literature, and account for nearly all prevalent approaches to reading instruction. The definitions for the terms employed are common to this literature and in close general agreement with A Dictionary of Reading (Harris & Hodges, 1981). The definitions for the six theoretical dimensions were taken

from Goodman and Page (1978). The identification of the variables with one or more of the six dimensions was done in accordance with that study to accomplish a degree of replication. Many of these identifications are self-evident, but a few were questioned by evaluators during the study. The reading instruction programs selected for inclusion in this research were also selected from those studied in Goodman and Page (1978) to accomplish a degree of replication. These programs are, on face, representative of the majority of published basal reading programs and include a variety of content that is amply representative of the major published basal reader programs of the day. The evaluators in this research were teachers trained in reading instruction who shared many characteristics with a national survey of teachers. All of these teachers were enrolled in the same graduate course in reading education. Many had served on textbook selection committees before, and found this method of program evaluation to be illuminating.

A measure of criterion-related validity is present in this study in that it is a partial replication of Goodman and Page (1978). The basic theoretical framework, terminology, and the programs used are similar to that study. Goodman and Page (1978) found no significant differences on nine theoretical dimensions between seven basal reader programs. The current study employs more extensive statistical analysis on six of those dimensions for five of those programs. Only one program is identified as significantly different in enough cases to warrant distinction. The findings of this study are in general concurrence with Goodman and Page (1978), and a substantial degree of replication is found.

A degree of construct validity for this research is demonstrated through the factor analysis of the theoretical dimensions (Table 6; Appendix VI). The

theoretical dimensions employed in this study have substantial construct validity themselves, in that variables logically related to a given dimension have higher correlations with that dimension than any of the other dimensions in virtually all cases (Appendix V). The factor analysis of these dimensions reveals clusters of related dimensions that are very illustrative of current theoretical positions in reading instruction (Reed and Ward,1982). These positions are the subskills view, represented in this study by the Text-controlled Spoken Analogue factor, and the holistic-function view, represented here by the Reader-controlled Construction of Knowledge factor. Various combinations of these views yield the third, or eclectic, view. The findings of this research supply empirical evidence for the existence and proportions of these views in the most commonly used form of reading instruction program. The instrument used in this research appears to have utility for gauging the presence of these views with a fair degree of reliability in applied settings.

Limitations

Several limitations should be kept in mind in generalizing from this study. The moderate reliability found here puts some ceiling on the validity of these findings. The sample of teachers used as evaluators in this study, while representative, is geographically local and nonrandom. Evaluators were assigned to materials on a matched rather than random basis. Data was gathered in a controlled setting, but from several groups during a two-year period. Some treatment implementation effects could be present. The reading programs

selected are amply representative of the field, but approximately fifteen major basal reader series were in print during this study, and generalization beyond this sample must be made with circumspection. Programs also change with revision, and currently revised programs, while appearing similar in approach, may have somewhat different emphases.

VII. Discussion and Conclusions

Both theoretical and practical insights emerge from the findings of this study. A theoretical framework for describing reading instruction is established and empirically verified in an applied setting. This framework consists of six theoretical dimensions which are representative of the current range of views in reading education. Three of these dimensions represent views of reading and language: reading as producing the spoken analogue of printed language, reading as the reconstruction of the author's message, and reading as the construction of knowledge about and/or beyond the author's message (Figure 1). Three of these dimensions represent views of the teaching-learning process, particularly as regards basic skill instruction: text (or program) controlled, teacher controlled, or reader (student) controlled (Figure 2). A 3x3 matrix of these six dimensions yields a descriptive theoretical framework which can encompass virtually any applied reading education activity (Figure 3). An assessment instrument which profiles reading programs on these six dimensions (Figure 4) is used to assess five basal reader programs which were widely used in the 1970's and early 1980's. The variables used in this assessment instrument are drawn from the current literature of reading instruction, and represent a wide, if not complete, array of the activities and approaches in current use. The assessment of these programs is performed by inservice reading teachers in

a graduate course in reading. Multivariate analysis of the scoring profiles results in a degree of empirical validation for the theoretical framework and assessment instrument, a finding of marked similarity in the programs assessed, and a look at the underlying structure of reading education as typified by these programs. The findings of the factor analysis are perhaps most revealing in this last regard.

Two factors were identified in the factor analysis which account for over 62% of the variance in the assessments. These factors can be seen as defining the poles of a continuum which describes the most basic theoretical issue in reading instruction today. One pole of this continuum holds that reading instruction should be heavily organized, program controlled, subcategorize reading into decoding and comprehension skills, deal with decoding to speech as a prerequisite to comprehension, and deal with lower levels of comprehension and cognition before more advanced levels. This view of reading has been labeled the "bottom-up" or subskills view, and is often associated with behaviorist psychology, stimulus-response associationism, and conditioning. Factor II in the factor analysis receives its highest loadings from the Text-controlled and Spoken Analogue dimensions respectively. This combination reflects to some degree a behaviorist emphasis on environmental conditioning, the association of written stimuli with spoken responses, and a view of learning as observable changes in behavior as the result of directed instruction. The other pole of this continuum holds that reading instruction should place the child at the center of problem solving experiences, emphasize internal exploration rather than external organization, view reading holistically, and deal with comprehension and cognition at all levels from the start. This view of reading has been labeled the "top-down" or holistic-functional view, and is often associated with cognitive psychology, inner perceptual organization, discovery learning, and the guided development of insight. Factor I in the factor analysis receives

its highest loadings from the Construction of Knowledge and Reader-controlled dimensions respectively. This combination reflects to some degree a cognitive emphasis on student freedom to develop and pursue personal hypotheses, the inner organization and reorganization of perceptual experience, and the building of cognitive structures.

The typical reading programs assessed in this study place most of their emphasis on a relatively behavioristic, "bottom-up" methodology. To the slim extent that these programs differ, the difference can be seen as a shift toward a relatively cognitive, "top-down" methodology. This situation defines a moderately eclectic methodology. While basal readers have long been associated with eclecticism, this study tends to show that this eclecticism is somewhat narrow and that the preponderance of methodology derives from one school of psychological thought. Critics have suggested, however, that what might seem to be purposeful eclecticism in basal readers is actually an agglomeration of salable traditional practices with no sound theoretical basis (Staiger, 1969; Goodman and Page, 1978). At any rate, educators with a cognitivist theoretical leaning should find little to extol in these reading programs.

A practical saying holds that a difference is a difference only if it makes a difference. Even though some statistically significant variations were found between programs in this study, these differences may be practically inconsequential. Most of the empirical conclusions of this study -- that middle-grade basal readers are quite similar, that they emphasize lower levels of comprehension, that they place more importance on text directions than on teacher or student judgement -- will hardly surprise the experienced practitioner. Research often simply corroborates our best intuitions. There is, however, one noteworthy practical insight revealed in this study: despite quantitative similarity, teachers favored some basal programs over others. To explore the extent to which the variables in this study could account for these differences, partial

correlations were computed between holistic ratings and the theoretical dimensions and specific variables in the Profile Instrument. Terminology test scores and years of experience were held constant in these correlations. Statistically significant partial correlations were found between holistic ratings and all of the theoretical dimensions. These relationships were of low magnitude, ranging from .198 on the Construction of Knowledge dimension to .255 on the Teacher-controlled dimension. Only 7 specific variables produced partial correlations which surpassed those for the theoretical dimensions, the highest being a .31 partial correlation between holistic rating and the Interactive (role of the teacher) variable. These correlations are given in Table 9.

The variance accounted for by these relationships is not large. Evaluators appeared to somewhat favor multiple choice and missing elements activities (perhaps because of the ease of correcting these activities). The highest correlations for the dimensions and specific variables, respectively, were with the Teacher-controlled dimension and Interactive (role of the teacher) variable. Evaluators appeared to somewhat favor latitude in this area. As far as these dimensions and variables are concerned, teachers seemed to somewhat favor programs that afforded convenience in task management and programs that were perceived to invite teacher input. Familiarity with the program (Table 2) and readability ratings (Appendix II) would not appear to be distinguishing factors between the high and low rated programs. Perhaps the only conclusion that can be drawn is that most of the variance in holistic ratings must be accounted for by variables not addressed in this study: content quality, organization, physical features, etc. Given the array of relatively low correlations seen here, it is possible that no single variable is predominant; teachers may see numerous qualities coming together in one program that constitute an appealing assemblage of raw material for instruction. This conclusion, however, should not be generalized far beyond this study: many of these evaluators were

Table 8

Second Order Partial Correlations Between Holistic Ratings (1) and Theoretical Dimensions (2) and Specific Variables (3) Controlling for Terminology Test Score (4) and Years of Experience (5)

I. Theoretical Dimensions

Dimension	$r_{12.45}$	$p <$
SA	.205	.019
RM	.244	.007
CK	.198	.022
TX	.180	.034
TR	.255	.005
RDR	.221	.012

II. Specific Variables*

Variable	Dimension Addressed	$r_{13.45}$	$p <$
Whole word identification	SA	.285	.002
Multiple choice	SA	.276	.002
Missing elements	SA	.262	.004
Missing elements	RM	.270	.003
Inferential comprehension	RM	.288	.002
Multiple choice	CK	.265	.003
Interactive (role of the teacher)	TR	.311	.001

* only variables with correlation magnitudes beyond ±.25 are reported.

pursuing graduate work in reading and tended to be younger as a group than the national average. Shannon (1982) has recently shown that reading teachers with more reading coursework were distinctly less likely to accept the scientific validity of commercial materials than other classroom teachers or administrators.

For generations, commercial basal reader programs have been the mainstay of reading instruction in American schools. This study finds that typical middle grade basal readers are very alike in their theoretical base, and in many quantifiable particulars as well. Reading instruction emanating specifically from these programs would certainly be very similar in nature. The extent to which basal reading instruction differs is likely due to other factors such as teacher manipulation of materials, curriculum goals, learner characteristics, etc. The theoretical alternatives discovered in this study are clearly consistent with the literature of reading instruction, and those alternatives merit the attention of those interested in improving methods of reading instruction. The Reading Program Theory Assessment Profile used in this study affords one opportunity to empirically evaluate those alternatives in basal and other reading programs.

The insights derived from this research form an incremental contribution to the clearer distinction of reading instruction variables, a highly warranted research goal. A clearer dilineation of instructional variables is a necessary prerequisite to applied reading instruction research. Further definition of the central variables in reading instruction, the variations in their actual application, and the results of clearly distinguishable instruction on learning form a research information base which at present suffers from serious voids. The research presented here may serve to partially fill one such void, and to systematically further our knowledge of reading instruction. Further research in this area is called for.

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APPENDICES

Appendix I

Instruments

Reading Program Theory Assessment Profile

MANUAL

Mark C. Sadoski

INTRODUCTION

A recent surge of interest in theoretical definitions and models of reading, accompanied by a burgeoning array of reading materials being marketed to schools, has produced an ever-widening gap between theory and practice in reading instruction. A polarized debate regarding what is central to the teaching of reading, surrounded by a bewildering number of instructional approaches, publisher's materials, reviews, research reports, and claims has resulted in much confusion regarding how reading should best be taught. A vicious circle between publishers and schools, wherein teachers of necessity use what publishers supply and publishers feel they are giving teachers what they want, has compounded the problem. Educators are often left with no practical guidance as to which programs best accommodate their own accepted theories of reading instruction and general philosophies of education. What is sorely needed is an intermediate step between theoretical positions and the everyday materials and activities actually used in the classroom.

The Reading Program Theory Assessment Profile is a step in that direction. Six essentials, or dimensions, in reading education have been identified which are universally found in reading programs. Virtually all reading instruction is founded on this theoretical base, although educators differ as to which essentials should be emphasized. The profile that results from a program assessment using the Reading Program Theory Assessment Profile reveals the emphases of a program. The extent to which a given program matches the aims of a given school, community, or state forms one basis for educational decision making.

DESCRIPTION

The Reading Program Theory Assessment Profile is composed of two parts. Part I presents Profile Terminology and Part II presents the Profile Instrument. The Profile Instrument (Part II) is divided into two sections: a listing of forty-eight prevalent instructional approaches and activities, divided into nine categories, and a rating of the level of presence in the program of each of six theoretical dimensions. The instructional approaches and activities are stated

in common terminology which is explained in the Profile Terminology (Part I). The six theoretical dimensions, also explained in the Profile Terminology, reflect three views of reading and language, and three views of teaching and learning.

The reading and language dimensions are measured in light of perceived goals, or missions in reading instruction. Three such missions have been identified. They include: 1) producing a spoken analogue (SA) of an author's printed language, that is, converting print into speech either orally or silently, 2) the reconstruction by the reader of the author's message (RM), that is, constructing a message from print which substantially matches that of the writer, and 3) the construction of knowledge about the author's message (CK). Constructed knowledge need not be new knowledge to anyone but the reader, and this mission is often accomplished when readers form reactions to their reading or evaluate a message. These three missions are not mutually exclusive, and are addressed to varying degrees in varying reading programs. The nature of a program's instructional activities, coupled with the reading missions primarily addressed, reflect the explicit or implicit convictions of the program's authors about reading, and also about language and meaning, i.e., whether language and meaning are acquired behaviors, innately formed, or interactively constructed, and what size unit of language is mainly attended to in reading.

Three theoretical dimensions regarding teaching and learning are also measured. They reflect to what extent the teaching-learning process should be controlled by the text (TX), the teacher (TR), or the reader (RDR). These dimensions reflect the explicit or implicit convictions of the program's authors about the competence, actionality, and abilities of teachers and/or students, and about the purposes and ways in which these programs should be used by them.

In the Profile, from one to three dimensions may be addressed by any one activity or approach. This number is noted in parentheses on the Profile Instrument after the name of the listed activity or approach, and calls for the evaluators to respond accordingly. Each blank is given a rating from 0 to 3

based on the emphasis that activity or approach receives in the program. A rating of zero indicates an absence of this activity or approach, a 1 indicates a few occurrences, a 2 indicates regular occurrence, and a rating of 3 indicates many occurrences of this activity or approach. Where multiple blanks are provided, judgement must be used regarding the specific aims of the activity or approach. For example, dictionary skills (activity or approach 2d) are used to address all three dimensions in reading and language: the dictionary can be used to determine pronunciation (Spoken Analogue dimension), to check a definition (Reconstruction of Message dimension), or to explore the various meanings, forms, linguistic functions, usages, or etymologies of words (Construction of Knowledge dimension). Raters must distinguish the proportions of this activity that are aimed at each dimension and rate each accordingly. Similarly, diagnosis-prescription (9g) in teaching can be controlled either by the program materials, as in skills management programs (Text Controlled dimension), or by the teacher's own decisions (Teacher-Controlled dimension). Raters must distinguish the approach and rate accordingly.

The activity and approach terms used in this instrument are not mutually exclusive. A high rating on one activity or approach would necessitate a high rating on other complementary activities or approaches. For example, the introduction of whole new vocabulary words prior to reading a selection that heavily employs these vocabulary words is common to the reading instruction approach called the directed reading lesson. Programs and materials relying heavily on the whole-word directed reading lesson approach would tend to receive substantial ratings on a program focus of word meaning recognition (1c), configuration as the mode of getting meaning from print (2a), words as the language unit emphasized (3b), a passive role for the learner (7a), and word recognition (9a) and directed reading lesson (9d) as the curriculum emphases. Other activities or approaches would also be rated according to the provision in the specific materials for comprehension instruction, teacher input, student input, etc. The feature of differentiated but

overlapping concepts in the terminology allows for broader and more detailed program description and assessment, and provides for a degree of consistency and reliability in rating.

When the ratings have been completed, the total for each theoretical dimension column is tallied. Because the number of blanks in each column is not the same, a weighting factor has been added to balance the scoring so that one dimension may be compared to another dimension directly. This entails multiplying the column total by these weighting factors: 1.36 for the Spoken Analogue dimension, 0 for the Reconstruction of Message dimension, 1.16 for the Construction of Knowledge dimension, 1.65 for the Text-Controlled dimension, 1.89 for the Teacher-Controlled dimension, and 1.65 for the Reader-Controlled dimension. Final scores are rounded off to the nearest whole number. When this has been completed, the theoretical positions present in the program can be determined and compared. Each dimension has a maximum score of 45; a comparatively higher number indicates a greater emphasis on a given theoretical position. A quartile scale is provided for general interpretation: a score of 0-11 indicates a low emphasis on this theoretical dimension, 12-22 indicates a low-to-moderate emphasis, 23-33 indicates a moderate-to-high emphasis, and 34-45 indicates a high emphasis on this theoretical dimension.

GUIDELINES FOR USE

Two considerations are necessary to the use of the Profile Instrument. It is suggested that whenever possible, several evaluators should work together, building mutual understandings of the Profile's terminology as a first step, using the Profile Terminology section as a guide. With unfamiliar programs or materials, a complete overview of both teacher and student materials should be performed next. This step should be completed independently by each evaluator.

Ratings for the approaches and activities as listed in the Profile Instrument are completed next, with each evaluator independently rating the appropriate blanks

for each approach or activity on the 0-3 scale. The criteria for rating the level of presence of each dimension should include direct communication from teacher's materials, indirect communication to the teacher through directions to be used in instructing students, direct communications in student's materials, or indirect development through materials assigned to students. The extent to which the reading and language dimensions are tested in the program should also be considered.

After each evaluator has completed the rating and tallied the scores for each dimension column, the raw scores should be compared among evaluators for consistency. Given initial mutual understanding of the Profile's terminology, scores should be relatively close. Discrepancies exceeding an 11-point difference between highest and lowest scores on the same column can be resolved by simple averaging. The final column tallies can then be multiplied by the weighting factor and rounded off to the nearest whole number for the final score.

INTERPRETATION OF RESULTS

The quartile scoring scale may be used for general interpretation of the scores, or number totals can be used directly for more specific comparisons. In either case, interpretation should proceed to three levels: identification of the program's objectives, inferences to the program's philosophy, and a comparison with the philosophy and objectives of the evaluators.

Program Profile

The first level of interpretation involves an objective determination of the program's aims. This determination can be made by answering several questions about the scoring:

1. On which dimensions for reading and language, and for teaching and learning, are the highest and lowest scores found?
2. What is the relative weight given to each mission in reading?
3. Regarding language, what unit of language is emphasized?

Programs which emphasize decoding tend to focus on small language units and regard language in terms of observable, measureable events and acquired behaviors; programs which emphasize comprehension tend to focus on medium to larger language units and regard language as either innate to the reader, or interactively constructed between reader and text.

4. Is the teaching-learning process guided by the reader, the teacher, or the text? Programs which are heavily reader-controlled emerge from foundations of cognitive psychology, emphasizing the acquisition of rules, the promotion of insight, and problem solving. Programs which are heavily teacher-controlled tend to derive from mentalistic views of learning, emphasizing the training of the faculties of the mind through mental exercise and adding new mental states to the learner's store of existing ones. Programs which are heavily text-controlled are usually rooted in associationist psychology and emphasize stimulus-response bond formation, and the learning of appropriate responses to environmental stimuli.

5. What is the distribution of the scoring? If all scores tend to be closely bunched near the center of the 0-45 scale, the program may be truly eclectic, or the program may have no particular aims and lack a theoretical base (a position that becomes less and less defensible as our knowledge increases). Evaluators will need to make judgements as to whether the program has strong recurrent strains that are harmonized together, or whether the program is foundering for lack of solid footing.

6. Does the emphasis or lack of emphasis on these dimensions agree or disagree with the publisher's claims and statements?

Evaluator Philosophy

A second level of interpretation of the results of the Profile involves comparing the indicated theoretical positions of the program with the reading theories and educational philosophies of the evaluators. This comparison is perhaps the most significant part of the evaluation, as it calls upon the evaluators to assess their own convictions about reading and educating. This

comparison can effectively be made by answering one general question: Does this reading program help us to do what we want to do in reading in the way we believe it should be done? The answer to this question involves the establishment of warrantable goals in reading, and determining the teaching-learning mode most justifiable in reading education.

DISCUSSION

This Reading Program Theory Assessment Profile addresses basic decision in reading education. To be sure, unanimity on decisions involving philosophy and theory is not always easily accessible, but the importance of dealing with them is central to improved learning guidance. The committed pursuit of valid educational ends arrived at independently of the influence of either fads or obsolete doctrines will help to eliminate some of the confusion presently felt in this area, and provide future direction for continued clarification and improvement. There is evidence that educators are influenced by implicit or explicit theoretical orientation and training. This instrument may be of significant value as a catalyst in encouraging reading educators to establish firmer footing and forge a way through the present entanglement of presumptions, proposals, methods, and materials that influence our practices in the teaching of reading.

Besides promoting basic decision making, this instrument can be useful in revealing where reading program materials actually steer, regardless of persuasive claims. If reading educators are to effectively direct reading education, the programs and materials they employ must match their perceived goals and directions. When a program is demonstrated to be in conflict with those goals and directions, its value should be questioned.

Several caveats should be observed regarding the use of this instrument. First, theories and philosophies are seldom held in pure form. Our convictions emerge from a multiplicity of influences, and rarely align directly with the

implied or stated position of others. It may be prudent to observe latitude in our approaches, particularly in regard to the plurality of today's schools. However, while no one need expect to state a complete and irrevocable theoretical stance for once and for all, vacillation without an anchor point is perhaps even less profitable. Individual and group decision, as suggested in the instrument, should facilitate the definition of a common purpose.

Secondly, this instrument does not deal with non-theoretical considerations such as cost, consumability, appropriateness of content, etc. These matters are also of consequence, and checklists are available elsewhere for assistance in this area, if needed.

Thirdly, this instrument will be found most useful with a substantial program such as a basal reader series. While it may also be used with supplementary kits or ancillary materials, it is likely that its full value will be recognized on a larger scale.

Finally, commercial programs and materials tend to show the influence of educational latitude and multiple purpose just as groups or individuals do. If reading education is to become a more clearly founded pursuit, it will be necessary to define our positions and call for commercial materials to comply or fall from use. Cooperation between educators and publishers in this way can result in more efficient, effective, and realistic education in reading.

The Reading Program Theory Assessment Profile may be useful in helping teachers make appropriate decisions regarding the selection of commercial programs, or in the construction of their own programs. It may also be of use to the research and publishing communities in defining program content, or to teacher trainers helping to introduce prospective reading educators to the present realities of reading instruction. Inasmuch, this instrument may serve as a step towards the improvement of that instruction.

READING PROGRAM THEORY ASSESSMENT PROFILE

Mark C. Sadoski

PART I: PROFILE TERMINOLOGY

These terms are employed in the Profile Instrument (Part II). They describe activities and approaches presently used in reading instruction. These terms are not mutually exclusive, and some overlapping will be evident.

A. Theoretical Dimensions

1. Spoken Analogue (SA) - Converting an author's printed language into speech, either orally or silently. May or may not involve understanding the decoded message, depending on the reader's knowledge.
2. Reconstruction of Author's Message (RM) - Gaining meaning through comprehension of an author's use of syntax and semantics, in context.
3. Construction of Knowledge About an Author's Message (CK) - The reader reacts to the comprehension of the author's message in a thoughtful way; e.g., critical reading, application, appreciation. The knowledge constructed need not be new knowledge to anyone but the reader.
4. Text-Controlled Teaching/Learning (TX) - The text material determines purposes for reading and controls the teaching-learning process. The teacher and student follow directions provided in the program.
5. Teacher-Controlled Teaching/Learning (TR) - The teacher determines purposes for reading and controls the teaching-learning process. Often done through pre and post questioning, study guides, etc. The reader and text are subject to the teacher's perception and direction.
6. Reader-Controlled Teaching/Learning (RDR) - The reader determines purposes for reading and pursues the learning process with teacher assistance. May be done individually or in group projects. Readers may reexamine and restructure the process to fit their requirements.

B. Activities and Approaches

1. Program Focus

a. Matching Sounds and Letters - Identifying and combining letter symbols, and the sounds usually associated with them. Prerequisite to producing the spoken analogue of printed language.

b. Whole Word Identification - Learning to say the word when the graphic representation of the word is presented; e.g., flash cards, word lists, configuration exercises, etc. Often used in developing sight vocabulary, usually used with words that are part of the reader's speaking vocabulary.

c. Word Meaning Recognition - Associating the graphic representation of the word with one or more of its meanings. Often done in isolation on lists as a method of vocabulary development; can also employ structural analysis and/or sentence context.

d. Syntactic Reconstruction - Rearranging words, phrases, clauses or sentences to produce the most acceptable arrangement. Can also involve using appropriate punctuation or oral reading intonation.

e. Meaning Reconstruction - Rebuilding or reassembling the meaning behind a message without going beyond the message: e.g., finding the correct paraphrase from a multiple choice, filling in the blanks to make sentences mean the same, outlining, webbing, summarizing, retelling.

f. Knowledge Construction - Critical reading, evaluation, appreciation, application. Creative reactions to messages that call for the reader's input of ideas; e.g. producing inferences or conclusions, differentiating fact and opinion, determining author's purpose and tone, applying rules to solve problems, etc.

2. Getting Meaning From Print

   a. Configuration - Recognizing a word by its shape, including its ascenders, descenders, length, etc.

   b. Phonics - The system of correspondence between phonemes and graphemes. May proceed from part to whole (synthetic phonics) or from whole to part (analytic phonics). Phonics usually focuses on elements smaller than a word, and always deals with sounds.

   c. Word Structure - Considering words through their parts: roots, prefixes, suffixes, syllables, letters and letter combinations. Commonly used as a decoding and/or vocabulary strategy.

   d. Dictionary Skills - Employing the dictionary for a variety of purposes: pronunciation, syntactic and semantic alternatives, checking guesses about unknown words, finding synonyms, etymologies, etc.

   e. Context (syntax, semantics, environment) - Reducing uncertainty about a part or parts of a message by seeing relationships between those parts; e.g., cloze. Also, drawing conclusions about a message from the constraints and clues provided by the locale, illustrations, etc. that surround the message.

3. Language Unit Emphasized

   a. Sub-word - Letter and sound combinations, their correspondence and meanings. Morphemes, affixes, syllables, inflectional endings, and all smaller-than-word units.

   b. Words - Pronounceable morphemes or combinations of morphemes separated by white spaces in print, with or without their lexical meanings.

   c. Phrases, Clauses, Sentences - Grammatical structures larger than words that function as units within a sentence.

   d. Paragraph - A single sentence or a group of sentences acting in some way as a unit. Frequently analyzed for structure.

e. Passage, Story, or Chapter - Any unit larger than a paragraph and smaller than a book or volume.

f. Entire Book or Content Area - The texts, tradebooks, anthologies, collections and reference works surrounding a curricular discipline such as literature, history, science, etc.

4. Comprehension Tasks

a. Subjective Reporting and Discussion - Indicating whether or not a passage was understood, or the degree to which it was understood, through student introspection, either probed or unprobed.

b. True-False Questions - Determining the verity of a statement regarding a passage. May call for student knowledge beyond the text; text may be present or absent.

c. Multiple Choice Questions - Choosing a correct statement about a passage from distractors. May call for student knowledge beyond the text; text may be present or absent.

d. Following Directions - Applying instructions or commands; e.g., recipes, building models, driving rules, etc.

e. Missing Elements - Providing elements to complete a message; e.g., reordering scrambled words or sentences, sentence completions, cloze.

f. Questions About a Passage - Responding to inquiries about a passage. Answers may call for text information or information from the reader, or both. May be oral or written.

g. Message Recognition - Selecting statements that reflect ideas in a passage; e.g., from an array, picking words or sentences that apply to a passage.

h. Message Reproduction - Retelling or restating a message or its parts either orally or in writing. Message may or may not be present. Paraphrasing, summarizing, retelling.

5. Level of Comprehension

   a. Literal - Recognition and recall of explicitly stated information calling for only elementary inferences on the reader's part.

   b. Inferential - Interpretive reading, deriving meanings not explicitly stated, understanding implied meanings in a message.

   c. Evaluative - Critical reading wherein readers utilize their background and judgment to appraise a message.

   d. Appreciative - Generating ideas beyond the scope of the text message. Extrapolating ideas to see their applications, sensing imagery and recognizing literary techniques, creatively going beyond what the author said and may have implied.

6. Locus of Control and Purpose for Reading

   a. Text Determined - The text establishes the objectivesand tasks through which the reading-learning act is accomplished.

   b. Teacher Determined - The teacher, either alone on in conjunction with text intentions, establishes objectives and tasks through which the reading-learning act is accomplished.

   c. Student Determined - Students design and select tasks, and pursue personal or group objectives in reading-learning, using teachers and texts to accomplish these ends.

7. Role of the Learner

   a. Passive - Learners are reactive to the conditioning, shaping, and direction of the learning environment.

   b. Active - Learners use self-determination to arrange the learning environment to suit perceived needs.

   c. Interactive - Learners arrange the environment and the environment shapes the learner. Learning is a reciprocal process.

8. Role of the Teacher

   a. Passive - Teachers serve as scripted participants or technicians who follow program directions and make circumstantial decisions such as scheduling. Teacherless situations such as programmed instruction fit this category as well.

   b. Active - Teachers serve as funds of information and sources of knowledge and wisdom, establishing and choosing content and procedures, and providing structure. Instruction, training, lecturing, and telling fit this category.

   c. Interactive - Teachers serve as guides, facilitators, or monitors who arrange learning situations to students requirements. Providing input to students and reacting to their output fits this category.

9. Curriculum Emphasis

   a. Phonics - Emphasis is on converting print to oral or silent speech through developing skills with phoneme-grapheme correspondences. Can be analytic, wherein whole words are broken into their sound and symbol components, or synthetic, wherein sounds and symbols are arranged into whole words. Structural linguistics approaches, wherein common sound patterns such as phonic clusters or phonograms are used to induce phonic generalizations, fit this category.

   b. Word Recognition - Emphasis is on identifying the sound and/or lexical meanings of words seen mainly as wholes. Vocabulary development skills such as word lists, flash cards, matching synonyms or antonyms, dictionary skills, adding affixes to roots or finding the roots, affixes, and/or syllables of larger words, and identifying individual words through context, fit this category.

   c. Language Experience - Emphasis is on students becoming authors for themselves to read. Students' own language is recorded on charts or in notebooks of self-written or dictated messages. Reading instruction uses these materials as a base.

d. Directed Reading Lesson - Emphasis is on an instructional framework around a basal reader selection or a content area selection. This framework usually includes: motivation, guided silent reading for a purpose, discussion, skills reinforcement, and extensive activities. Often used in conjunction with grouping. Can also include directed reading-thinking activities, and advance organizers such as structured overviews.

e. Theme or Content Unit - Emphasis is on organizing reading instruction around a central idea. Readings may be literary or informational, materials may come from one source or a number of sources, and a problem solution or culminating activity is usually the end result. Can be done with whole classes, groups, or individuals.

f. Differentiated Instruction - Emphasis is on providing instruction that is not the same for all students, through in-school organization. The curriculum may be reorganized in content, sequence, or approach, or students may be sub-grouped to work with departments, specialists, teams, or the individual teacher.

g. Diagnosis-Prescription - Emphasis is on assessing individual competence and deficit in reading ability and providing students with appropriate challenge and/or remediation. This emphasis is central to remedial reading, and commonly associated with criterion-referenced skills testing in classroom situations. Eclectic teaching to particular problems also fits this category.

h. Individualization - Emphasis is on students' self-selection and self-pacing in reading, capitalizing on individual interests and learning rates. Tradebooks are usually used as materials, and instruction takes place in individual conferences. Partial emphasis on individualization may be employed through supplementary reading projects and small group instruction as a substantial part of a larger reading program.

i. Student Self-Concept and Social Improvement - Emphasis is on producing well-adjusted individuals or social changes to improve learning and life. Self-actualization and cultural pluralism are contemporary thrusts; historically, emphasis has shifted between either the individual being dominant or society being dominant. Providing responsive environments, and stressing social relevance and preparation for life, fall into this category.

j. Technology - Emphasis is on a system-analytic, objective-referenced teaching and learning organization. Learnings are framed as products of particular experiences, and sequential steps, often followed by tests, provide the necessary input and provision for output. Programs which heavily employ machine hardware and softward components, or where programmed, teacherless materials are a mainstay fall into this category.

READING PROGRAM THEORY ASSESSMENT PROFILE

PART II: PROFILE INSTRUMENT

Directions:

1. Become familiar with the Profile Terminology (Part I).

2. Become familiar with the program and materials to be assessed.

3. Rate each activity or approach from 0-3 on each dimension where a blank is provided: 0 - no occurrence; 1 - few occurrences; 2 - regular occurrence; 3 - many occurrences. Where more than one blank occurs for an activity or approach, rate each blank from 0-3 according to individual judgment. Assess both teacher and student materials.

4. Total the column for each dimension individually.

5. Where necessary, arrive at consensus among evaluators on a single total for each column by: 1) averaging totals for a column that does not have more than an 11-point spread between the highest and lowest evaluator's totals, or 2) discussing individual item ratings where totals for the column vary by more than 11-points among the evaluators.

6. Multiply the final totals by the weighting factor and round off to the nearest whole number for the final score. The maximum score for each column is 45.

7. For interpreting scores, numbers can be compared directly, or use the scoring scale provided at the end of the Profile Instrument. Interpret in light of: program aims, program philosophy, evaluator aims and philosophy.

Theoretical Dimensions:

Reading and Language	Teaching and Learning
SA - Spoken Analogue	TX - Text-Controlled
RM - Reconstruction of Message	TR - Teacher-Controlled
CK - Construction of Knowledge	RDR - Reader-Controlled

PROFILE INSTRUMENT

ACTIVITY OR APPROACH	# of blanks	THEORETICAL DIMENSION					
		Reading and Language			Teaching and Learning		
		SA	RM	CK	TX	TR	RDR
1. Program Focus							
a. Matching sounds and letters	(1)	___					
b. Whole word identification	(1)	___					
c. Word meaning recognition	(1)		___				
d. Syntactic reconstruction	(1)		___				
e. Meaning reconstruction	(1)		___				
f. Knowledge contruction	(1)			___			
2. Getting Meaning From Print							
a. Configuration	(1)	___					
b. Phonics	(1)	___					
c. Word structure	(1)	___					
d. Dictionary skills	(3)	___	___	___			
e. Context	(2)		___	___			
3. Language Unit Emphasized							
a. Sub-word	(1)	___					
b. Words	(1)	___					
c. Phrases, clauses, sentences	(1)		___				
d. Paragraph	(1)			___			
e. Passage, story, chapter	(1)			___			
f. Entire book or content area	(1)			___			
4. Comprehension Tasks							
a. Subjective reporting and discussion	(2)		___	___			
b. True-false questions	(2)		___	___			
c. Multiple-choice questions	(3)	___	___	___			
d. Following directions	(2)		___	___			

	#	SA	RM	CK	TX	TR	RDR
e. Missing elements	(2)	___	___				
f. Questions about a passage	(2)		___	___			
g. Message recognition	(1)		___				
h. Message reproduction	(1)	___					
5. Level of Comprehension							
a. Literal	(1)		___				
b. Inferential	(1)		___				
c. Evaluative	(1)			___			
d. Appreciative	(1)			___			
6. Locus of Control and Purpose for Reading							
a. Text determined	(1)				___		
b. Teacher determined	(1)					___	
c. Student determined	(1)						___
7. Role of the Learner							
a. Passive*	(2)				___	___	
b. Active	(1)						___
c. Interactive	(1)						___
8. Role of the Teacher							
a. Passive	(1)				___		
b. Active	(1)					___	
c. Interactive	(1)						___
9. Curriculum Emphasis							
a. Phonics	(1)				___		
b. Word recognition	(1)				___		
c. Language experience	(1)						___
d. Directed reading lesson	(2)				___	___	

	#	SA	RM	CK	TX	TR	RDR
e. Theme or content unit	(2)					—	—
f. Differentiated instruction	(2)					—	—
g. Diagnosis - prescription	(2)				—	—	
h. Individualization (partial or complete)	(1)						—
i. Student self-concept and social improvement	(3)				—	—	—
j. Technology	(1)				—		
Column Total (raw score)							
Weighting Factor (x raw score)		1.36	-	1.16	1.65	1.89	1.65
Final Score (range: 0-45)							

Scoring Scale:

0-11 low emphasis

12-22 low-to-moderate emphasis

23-33 moderate-to-high emphasis

34-45 high emphasis

* Learners may be passive either to the text (TX) or teacher (TR). Rate the appropriate dimension to the extent that learners are passive to it.

Appendix II

Program Information

Program I

Smith, Nila B. Be a Better Reader. Englewood Cliffs, N.J.: Prentice-Hall, Inc. 1968.

Levels	Readability*
Foundations A	7
Foundations B	5
Foundations C	5

Program II

Aaron, Ira E.; Artley, A. Sterle; Goodman, Kenneth S.; Jenkins, William A.; Manning, John C.; Monroe, Marion; Pyle, Wilma J.; Robinson, Helen M.; Schiller, Andrew; Smith, Mildred B.; Sullivan, Lorraine M.; Weintraub, Samuel. Reading Unlimited. Glenview, Illinois; Scott, Foresman and Co., 1976.

Levels	Readability*
13.-15. Windows, Doorways, Bridges	8
16.-18. Passports, Excursions, Discoveries	5
19.-21. Voices, Endeavors, Triumphs	7

Program III

Weiss, Bernard J.; and Hunt, Lyman, C. Holt Basic Reading System. New York: Holt, Rinehart and Winston, 1973.

Levels	Readability*
13. Time to Wonder	7
14. Freedom's Ground	6
15. Riders on the Earth	6

Program IV

Clymer, Theodore; and McCullogh, Constance M.; Reading 360. New York: Ginn & Co., 1970.

Levels	Readability*
11. The Sun That Warms	5
12. On the Edge	7
13. To Turn a Stone	7

Program V

Hughs, Ann; Carus, Marianne; Thomas, Nellie; Gurren, Louise; Lebo, Jerome. Open Court Correlated Language Arts Program. LaSalle, Illinois: Open Court Publishing Co., 1971.

Levels	Readability*
4. What Joy Awaits You	7
5. But Life is Calling You	8
6. Awake to Worlds Unfolding	8

* As determined by instructions in: Fry, E. Fry's readability graph: clarifications, validity, and extension to Level 17. Journal of Reading, 1977, 21, 242-252.

Appendix III

Program Descriptive Statistics

PROGRAM DESCRIPTIVE STATISTICS

Key: D = dimension (SA = spoken analogue, RM = reconstruction of message, CK = construction of knowledge, TX = text controlled, TR = teacher controlled, RDR = reader controlled), N = number of evaluations, M = Mean, SD = standard deviation, SE = standard error of the mean, SK = skewness, KU = kurtosis.

BREAKDOWN BY PROGRAM

I. Be a Better Reader (4, 5, 6)

D	N	M	SD	SE	SK	KU
SA	21	28.43	6.51	1.42	-0.48	0.53
RM	21	30.48	4.59	1.00	-0.49	0.80
CK	21	24.08	7.99	1.74	0.27	-0.34
TX	21	30.09	3.94	0.86	-0.75	0.77
TR	21	16.29	8.01	1.75	0.27	-0.32
RDR	21	10.84	7.78	1.70	0.52	-0.49

II. Reading Unlimited (4, 5, 6)

D	N	M	SD	SE	SK	KU
SA	21	24.67	8.62	1.88	0.17	-0.01
RM	21	32.76	5.02	1.10	-1.73	5.77
CK	21	30.27	6.06	1.32	-0.19	-0.41
TX	21	28.52	5.27	1.15	0.99	0.76
TR	21	24.12	8.84	1.93	0.47	0.25
RDR	21	14.69	9.10	1.98	0.82	0.36

III. Holt Basic Reading System (4, 5, 6)

D	N	M	SD	SE	SK	KU
SA	21	27.91	4.78	1.04	-0.88	0.51
RM	21	31.86	4.36	0.95	0.46	-0.71
CK	21	28.12	5.57	1.22	0.10	-0.02
TX	21	32.29	5.73	1.25	-1.00	0.55
TR	21	23.85	6.85	1.50	-0.04	-0.64
RDR	21	11.94	5.45	1.19	0.58	1.13

IV. Reading 360 (4, 5, 6)

D	N	M	SD	SE	SK	KU
SA	21	26.03	5.65	1.23	0.43	0.52
RM	21	31.67	3.06	0.67	-0.48	-0.47
CK	21	29.99	4.25	0.93	-0.42	-0.44
TX	21	29.07	4.74	1.03	0.23	-0.43
TR	21	24.30	6.95	1.52	0.15	-1.40
RDR	21	14.14	7.48	1.64	0.33	-0.07

V. Open Court Correlated Language Arts Program (4, 5, 6)

D	N	M	SD	SE	SK	KU
SA	21	25.06	4.99	1.09	-0.06	-0.30
RM	21	29.91	4.34	0.95	0.39	-1.13
CK	21	28.89	5.74	1.25	-0.56	-0.12
TX	21	28.29	6.71	1.46	0.50	0.24
TR	21	19.44	9.28	2.03	0.45	-0.57
RDR	21	12.57	7.66	1.67	0.77	0.32

BREAKDOWN BY PROGRAM AND GRADE LEVEL

I. Be a Better Reader (4)

D	N	M	SD	SE	SK	KU
SA	7	24.29	7.75	2.93	0.06	0.57
RM	7	29.71	3.64	1.38	-0.58	-0.83
CK	7	24.03	5.75	2.17	-0.50	1.37
TX	7	29.00	5.12	1.94	-0.85	0.54
TR	7	15.12	5.77	2.18	-1.52	2.16
RDR	7	11.08	7.60	2.87	0.16	-0.05

I. Be a Better Reader (5)

D	N	M	SD	SE	SK	KU
SA	7	31.47	5.58	2.11	0.22	-2.07
RM	7	31.43	5.00	1.89	0.60	-1.17
CK	7	26.02	9.79	3.70	0.51	-0.58
TX	7	30.17	3.76	1.43	-0.37	-1.69
TR	7	15.12	6.46	2.44	-0.63	-1.54
RDR	7	11.08	8.92	3.37	0.65	0.05

I. Be a Better Reader (6)

D	N	M	SD	SE	SK	KU
SA	7	29.53	4.21	1.59	0.09	-1.15
RM	7	30.29	5.50	2.08	-1.70	3.41
CK	7	22.21	8.67	3.28	0.03	-1.93
TX	7	31.11	2.93	1.06	0.80	0.44
TR	7	18.63	11.36	4.29	0.09	-2.10
RDR	7	10.37	8.01	3.03	0.97	0.57

II. Reading Unlimited (4)

D	N	M	SD	SE	SK	KU
SA	7	26.62	9.68	3.66	0.38	-0.54
RM	7	34.29	3.64	1.38	1.16	0.85
CK	7	32.48	4.54	1.72	1.63	3.41
TX	7	29.70	6.53	2.47	0.84	0.23
TR	7	28.89	9.11	3.44	1.00	0.72
RDR	7	19.80	11.15	4.21	0.59	-1.50

II. Reading Unlimited (5)

D	N	M	SD	SE	SK	KU
SA	7	24.87	7.84	2.96	0.98	1.21
RM	7	32.71	3.35	1.27	-0.47	0.26
CK	7	25.52	6.60	2.49	1.31	1.89
TX	7	27.11	3.67	1.39	0.13	0.52
TR	7	20.25	7.77	2.94	0.59	-1.36
RDR	7	13.91	7.90	2.99	-0.32	-1.80

II. Reading Unlimited (6)

D	N	M	SD	SE	SK	KU
SA	7	22.54	9.08	3.43	-0.56	0.43
RM	7	31.29	7.36	2.78	-1.78	3.87
CK	7	32.81	4.33	1.63	-1.23	2.64
TX	7	28.76	5.70	2.16	1.15	1.63
TR	7	23.22	8.50	3.21	-0.25	0.33
RDR	7	10.37	6.00	2.27	0.23	-0.61

III. Holt Basic Reading System (4)

D	N	M	SD	SE	SK	KU
SA	7	30.50	3.03	1.14	-1.65	2.35
RM	7	30.29	2.50	0.94	-0.45	-1.30
CK	7	28.01	6.12	2.31	-1.31	1.84
TX	7	35.59	4.55	1.72	-1.57	2.94
TR	7	24.03	4.72	1.78	-0.54	-1.48
RDR	7	14.38	2.65	1.00	0.30	-1.83

III. Holt Basic Reading System (5)

D	N	M	SD	SE	SK	KU
SA	7	25.45	3.90	1.48	-0.73	-0.60
RM	7	33.57	5.50	2.08	-0.51	-0.84
CK	7	29.17	7.20	2.72	0.48	-1.74
TX	7	31.35	6.46	2.44	-1.77	3.12
TR	7	23.49	8.23	3.11	0.68	0.29
RDR	7	11.08	7.48	2.83	1.70	3.28

III. Holt Basic Reading System (6)

D	N	M	SD	SE	SK	KU
SA	7	27.78	6.07	2.30	-1.09	1.75
RM	7	31.71	4.54	1.71	0.92	-0.66
CK	7	27.18	3.47	1.31	0.73	-0.88
TX	7	29.94	5.17	1.96	-0.46	-0.44
TR	7	24.03	8.14	3.08	-0.62	-1.51
RDR	7	10.37	5.02	1.90	-0.33	-1.52

IV. Reading 360 (4)

D	N	M	SD	SE	SK	KU
SA	7	30.89	4.95	1.87	1.16	-0.88
RM	7	29.86	3.72	1.40	0.32	-1.72
CK	7	28.17	5.13	1.94	0.17	-0.60
TX	7	33.00	3.93	1.48	0.00	-2.12
TR	7	28.08	5.82	2.19	-0.20	-1.35
RDR	7	17.21	6.99	2.64	1.07	0.30

IV. Reading 360 (5)

D	N	M	SD	SE	SK	KU
SA	7	22.73	5.37	2.03	0.16	-2.03
RM	7	33.29	2.14	0.81	0.34	1.53
CK	7	31.49	4.76	1.80	-1.19	-0.03
TX	7	26.64	4.80	1.82	0.37	0.36
TR	7	26.46	6.36	2.40	-0.15	-1.49
RDR	7	13.67	7.30	2.76	0.20	2.36

IV. Reading 360 (6)

D	N	M	SD	SE	SK	KU
SA	7	24.48	3.14	1.19	0.11	-1.92
RM	7	31.86	2.41	0.91	-0.37	-0.50
CK	7	30.33	2.16	0.82	1.87	3.43
TX	7	27.58	2.97	1.12	1.07	0.70
TR	7	18.36	4.85	1.83	1.86	3.35
RDR	7	11.55	8.08	3.05	0.57	-0.58

V. Open Court Correlated Language Arts Program (4)

D	N	M	SD	SE	SK	KU
SA	7	26.42	2.92	1.10	0.35	-2.32
RM	7	29.57	3.78	1.43	0.44	-1.15
CK	7	30.49	5.43	2.05	-0.16	-0.47
TX	7	30.64	5.03	1.90	0.08	-1.31
TR	7	22.68	11.80	4.46	0.28	-2.11
RDR	7	12.96	10.19	3.85	1.17	0.27

V. Open Court Correlated Language Arts Program (5)

D	N	M	SD	SE	SK	KU
SA	7	26.42	5.43	2.05	0.55	-0.01
RM	7	27.29	2.75	1.04	0.59	-1.11
CK	7	25.52	6.42	2.43	-0.32	-1.18
TX	7	27.11	9.28	3.51	1.17	1.40
TR	7	17.82	9.50	3.59	0.38	-1.35
RDR	7	11.31	8.38	3.17	0.56	-0.22

V. Open Court Correlated Language Arts Program (6)

D	N	M	SD	SE	SK	KU
SA	7	22.34	5.65	2.14	0.24	-2.13
RM	7	32.86	4.74	1.79	-0.83	-0.43
CK	7	30.66	4.38	1.66	-0.60	-0.02
TX	7	27.11	5.38	2.03	-0.05	-1.99
TR	7	17.82	6.25	2.36	-1.30	2.09
RDR	7	13.44	4.31	1.63	0.26	-1.53

BREAKDOWN BY GRADE LEVEL

Grade Level 4

D	N	M	SD	SE	SK	KU
SA	35	27.74	6.42	1.09	-0.23	0.55
RM	35	30.74	3.74	0.63	0.34	0.24
CK	35	28.64	5.85	0.99	-0.35	0.54
TX	35	31.59	5.39	0.91	-0.20	-0.75
TR	35	23.76	8.94	1.51	0.13	0.02
RDR	35	15.09	8.38	1.42	0.80	0.43

Grade Level 5

D	N	M	SD	SE	SK	KU
SA	35	26.19	6.17	1.04	0.38	-0.24
RM	35	31.65	4.40	0.74	0.05	-0.88
CK	35	27.54	7.14	1.21	0.11	-0.83
TX	35	28.47	5.94	1.00	0.24	0.29
TR	35	20.63	8.34	1.41	0.12	-0.71
RDR	35	12.21	7.63	1.29	0.39	-0.69

Grade Level 6

D	N	M	SD	SE	SK	KU
SA	35	25.33	6.33	1.07	-0.67	0.69
RM	35	31.60	4.92	0.83	-1.24	2.54
CK	35	28.64	6.07	1.03	-1.17	1.49
TX	35	28.90	4.57	0.77	0.15	-0.30
TR	35	20.41	8.09	1.37	-0.03	-0.75
RDR	35	11.22	6.20	1.05	0.37	-0.42

Appendix IV

Summary Tables

1. ANCOVA of SA Dimension Adjusted for Two Covariates*

Source	DF	MS	F	p<
Program (A)	4	97.163	2.919	0.026
Grade Level (B)	2	44.465	1.336	0.268
AxB	8	55.278	1.661	0.119
Within	88			
Total	102			

2. ANCOVA of RM Dimension Adjusted for Two Covariates*

Source	DF	MS	F	p<
Program (A)	4	28.513	1.570	0.189
Grade Level (B)	2	11.116	0.612	0.544
AxB	8	28.376	1.563	0.148
Within	88			
Total	102			

3. ANCOVA of CK Dimension Adjusted for Two Covariates*

Source	DF	MS	F	p<
Program (A)	4	131.869	4.001	0.005
Grade Level (B)	2	11.578	0.351	0.705
AxB	8	53.891	1.635	0.126
Within	88			
Total	102			

* Covariates were terminology test score and years of experience

4. ANCOVA of TX Dimension Adjusted for Two Covariates*

Source	DF	MS	F	p<
Program (A)	4	65.264	2.336	0.062
Grade Level (B)	2	92.982	3.325	0.041
AxB	8	21.134	0.756	0.642
Within	88			
Total	102			

5. ANCOVA of TR Dimension Adjusted for Two Covariates*

Source	DF	MS	F	p<
Program (A)	4	292.812	4.889	0.001
Grade Level (B)	2	136.450	2.278	0.108
AxB	8	75.905	1.267	0.271
Within	88			
Total	102			

6. ANCOVA of RDR Dimension Adjusted for Two Covariates*

Source	DF	MS	F	p<
Program (A)	4	52.137	0.975	0.425
Grade Level (B)	2	133.035	2.488	0.089
AxB	8	31.382	0.587	0.786
Within	88			
Total	102			

* Covariates were terminology test score and years of experience.

Appendix V

Correlations of Activity and Approach Ratings
With Total Scores for Dimensions

ZERO-ORDER CORRELATIONS OF ACTIVITY AND APPROACH RATINGS WITH DIMENSION TOTAL SCORES, N=105

Activity or Approach (dimension addressed is in parentheses)	Dimensions (*p < .05, ** p < .01)					
	SA	RM	CK	TX	TR	RDR
1. Program Focus						
a. Matching sounds and letters (SA)	.61**	-.16	-.11	.30**	-.11	.09
b. Whole word identification (SA)	.52**	.07	.24*	.20*	.22*	.30**
c. Word meaning recognition (RM)	.13	.25**	-.01	-.02	-.17	-.00
d. Syntactic reconstruction (RM)	.08	.42**	.24*	.20*	.13	.10
e. Meaning reconstruction (RM)	-.04	.27**	.24*	-.04	-.06	.05
f. Knowledge construction (CK)	.02	.27**	.55**	.07	.25**	.22*
2. Getting Meaning From Print						
a. Configuration (SA)	.36**	-.01	-.12	-.01	-.04	.15
b. Phonics (SA)	.58**	-.16	-.25*	.31**	-.03	.11
c. Word structure (SA)	.33**	.21*	.21*	.18	.14	.16
d. Dictionary Skills						
(SA)	.49**	.21*	.24*	.21*	.16	.35**
(RM)	.18	.46**	.28**	.03	.17	.29**
(CK)	.26**	.29**	.40**	.08	.16	.26**
e. Context						
(RM)	.04	.35**	.23*	-.09	.16	.17
(CK)	.17	.49**	.54**	.03	.22	.29**
3. Language Unit Emphasized						
a. Sub-word (SA)	.45**	-.00	.01	.10	.15	.08
b. Words (SA)	.36**	.14	.12	.04	.02	.12
c. Phrases, clauses, sentences (RM)	.06	.37**	.27**	-.14	.01	.12
d. Paragraph (CK)	.08	.31**	.50**	.05	.13	.24*

* $p < .05$ ** $p < .01$

	SA	RM	CK	TX	TR	RDR
e. Passage, story, chapter (CK)	-.20*	.19	.40**	-.05	.08	.05
f. Entire book or content area (CK)	.13	.15	.51**	.04	.19	.29**
4. Comprehension Tasks						
a. Subjective reporting and discussion						
(RM)	-.06	.33**	.34**	.08	.17	-.03
(CK)	-.02	.34**	.54**	.10	.18	.06
b. True-false questions						
(RM)	.12	.44**	.28**	.05	.14	.22*
(CK)	.13	.39**	.45**	.04	.21*	.27**
c. Multiple-choice questions						
(SA)	.41**	.38**	.31**	.20*	.29**	.33**
(RM)	-.04	.52**	.29**	.10	.24*	.19*
(CK)	.10	.48**	.40**	.18	.33**	.28**
d. Following directions						
(RM)	.19	.29**	.28**	.04	.08	.15
(CK)	.23*	.23*	.43**	-.01	.16	.28
e. Missing elements						
(SA)	.45**	.35**	.05	.23*	.14	.20*
(RM)	.12	.33**	-.05	.08	-.05	.13
f. Questions about a passage						
(RM)	.13	.26**	.13	.06	.18	.09
(CK)	.03	.17	.49**	-.03	.20*	.25**
g. Message recognition (RM)	.18	.45**	.18	.01	.13	.11
h. Message reproduction (SA)	.39**	.20*	.31**	.08	.17	.23*

* $p < .05$ ** $p < .01$

	SA	RM	CK	TX	TR	RDR
5. Level of Comprehension						
a. Literal (RM)	.22*	.24*	.04	.15	.11	.12
b. Inferential (RM)	.10	.21*	.28**	-.10	.09	.09
c. Evaluative (CK)	.08	.09	.55**	-.10	.16	.14
d. Appreciative (CK)	.11	.10	.56**	.16	.15	.10
6. Locus of Control and Purpose for Reading						
a. Text-determined (TX)	-.12	-.09	-.10	.19*	-.31**	-.11
b. Teacher-determined (TR)	.14	.05	.15	-.17	.55**	.42**
c. Student-determined (RDR)	.16	.17	.23*	-.12	.20*	.58**
7. Role of the Learner						
a. Passive						
(TX)	-.15	-.12	-.12	.32**	-.25*	-.44**
(TR)	.02	.12	.15	.07	.54**	.20*
b. Active (RDR)	.14	.24*	.33**	-.25*	.24*	.68**
c. Interactive (RDR)	.25*	.25*	.32**	-.04	.35**	.70**
8. Role of the Teacher						
a. Passive (TX)	.12	-.04	-.19	.55**	-.24*	-.24*
b. Active (TR)	.10	.16	.40**	-.14	.66**	.46**
c. Interactive (RDR)	.19*	.19*	.27**	-.05	.53**	.64**
9. Curriculum Emphasis						
a. Phonics (TX)	.53**	-.12	-.20	.51**	-.09	.08
b. Word recognition (TX)	.34**	.10	.08	.40**	.11	.17
c. Language Experience (RDR)	.34**	.10	.29**	.11	.37**	.40**
d. Directed Reading Lesson						
(TX)	-.08	-.02	.11	.29**	-.01	-.10
(TR)	.10	.13	.20*	-.03	.53**	.37**

* $p < .05$ ** $p < .01$

	SA	RM	CK	TX	TR	RDR
e. Theme or content unit						
(TR)	.03	.17	.19*	-.00	.55**	.41**
(RDR)	.19	.20*	.08	-.07	.27**	.52**
f. Differentiated Instruction						
(TR)	.25**	.04	.07	.26**	.56**	.24*
(RDR)	.40**	.04	.10	.12	.35**	.53**
g. Diagnosis-prescription						
(TX)	.16	.20*	.17	.43**	.46**	.13
(TR)	.18	.23*	.25**	.28**	.68**	.35**
h. Individualization (RDR)	.24*	.15	.19*	.12	.07	.43**
i. Self-concept & social improvement						
(TX)	.14	.18	.33**	.51**	.27**	.10
(TR)	.27**	.28**	.43**	.35**	.59**	.32**
(RDR)	.24*	.38**	.38**	.17	.55**	.50**
j. Technology (TX)	.25*	.15	.22*	.46**	.22*	.19*

* $p < .05$ ** $p < .01$

Appendix VI

Factor Analysis Information

PRINCIPAL COMPONENTS FACTOR ANALYSIS WITH
ORTHOGONAL (VARIMAX) ROTATION OF SIX THEORETICAL DIMENSIONS

1. Correlation Matrix of Six Theoretical Dimensions

	SA	RM	CK	TK	TR	RDR
SA	1.00	.248	.194	.389	.228	.433
RM		1.00	.561	.098	.253	.342
CK			1.00	.104	.385	.436
TX				1.00	.140	-.001
TR					1.00	.591
RDR						1.00

2. Eigenvalues and Variance Accounted For

Factor	Eigenvalue	Portion of Variance
I	2.554	42.6
II	1.183	19.7
	Total =	62.3

3. Varimax Rotated Factor Matrix with Communalities

Variable	Factor I	Factor II	Communality
SA	0.324	0.758	0.680
RM	0.696	0.075	0.491
CK	0.788	0.025	0.622
TX	0.048	0.879	0.775
TR	0.703	0.152	0.517
RDR	0.795	0.146	0.653